Aldous Huxley's
Brave New World
Introduction

Aldous Huxley was born in Surrey, England, on July 26, 1894, to an illustrious family deeply rooted in England's literary and scientific tradition. Huxley's father, Raised in this family of scientists, writers, and teachers (his father was a writer and teacher, and his mother a schoolmistress), Huxley received an excellent education, first at home, then at Eton, providing him with access to numerous fields of knowledge. After graduating from Oxford in 1916, Huxley began to make a name for himself writing satirical pieces about the British upper class. Later on, Huxley left his early satires behind and became more interested in writing about subjects with deeper philosophical and ethical significance. Huxley's *Brave New World,* published in 1932, imagined a fictional future in which free will and individuality have been sacrificed in deference to complete social stability.

Brave New World marked a step in a new direction for Huxley, combining his skill for satire with his fascination with science to create a dystopian (anti-utopian) world in which a totalitarian government controlled society by the use of science and technology.

Through its exploration of the pitfalls of linking science, technology, and politics, and its argument that such a link will likely reduce human individuality, *Brave New World* deals with similar themes as George Orwell's famous novel ***1984***. Orwell wrote his novel in 1949, after the dangers of totalitarian governments had been played out to tragic effect in World War II, and during the great struggle of the Cold War and the arms race. Huxley anticipated all of these developments. Hitler came to power in Germany a year after the publication of *Brave New World,* using 'science' as justification to institute a eugenics program to rid German society of "those not fit to live." World War II broke out six years after the book's publication. The atomic bomb was dropped thirteen years after its publication, initiating the Cold War and what President Eisenhower referred to as a frightening buildup of the "military-industrial complex." Huxley's novel seems, in many ways, to prophesize the major themes and struggles that dominated life and debate in the second half of the twentieth century and continue to dominate it in the twenty-first.

Utopias and Dystopias

Is *Brave New World* an example of utopian or dystopian literature? A utopia is an imaginary society organized to create ideal conditions for human beings, eliminating hatred, pain, neglect, and all of the other evils of the world.

The word *utopia* comes from Sir Thomas More's novel *Utopia* (1516), and it is derived from Greek roots that could be translated to mean either "good place" or "no place." Books that include descriptions of utopian societies were written long before More's novel, however. Plato's *Republic* is a prime example. Sometimes the societies described are meant to represent the perfect society, but sometimes utopias are created to satirize existing societies, or simply to speculate about what life might be like under different conditions.

In the 1920s, just before *Brave New World* was written, a number of bitterly satirical novels were written to describe the horrors of a planned or totalitarian society. The societies they describe are called

dystopias, places where things are badly awry. Either term, utopia or dystopia, could correctly be used to describe *Brave New World.*

Brave New World – Introduction

Since its publication in 1932, *Brave New World* and its author have been the subject of much commentary and much criticism. Huxley has imaginatively employed scientific facts and theories to produce a classic of its kind. This novel is in the tradition of Jules Verne, the French novelist who wrote *Twenty Thousand Leagues under the Sea* and *Journey to the Center of the Earth*, and H. G. Wells, the English novelist who wrote *War of the Worlds*. Few writers of science fiction have equaled Huxley's ability to make the unbelievable seem believable and to make the improbable seem probable.

Huxley's satire expresses his profound pessimism. He sees little chance of mankind saving itself; he sees mankind inexorably moving toward self-destruction. He sees himself as a voice crying in the wilderness - but crying to no avail, for the deaf refuse to hear.

The prophetic elements in *Brave New World* contribute much to its continuing popularity because year by year we see more and more of Huxley's fantasy becoming reality. Huxley himself later commented that we are moving in the direction of this Utopia much more rapidly than anyone could have imagined. At the time the novel was written only a comparatively few research scientists were concerned with conditioning, the importance of heredity and environment, and the effect of chemical imbalance on physical and mental development. Today, governments, educational institutions, and industries are exploiting the results of research in these areas.

An Historical Perspective

By the time Huxley started to write *Brave New World*, the tremendous political, economic, and philosophical changes taking place in Europe and America contributed to his disillusionment. On the international political scene, we have the Bolshevik Revolution in Russia, the dictatorship of Mussolini in Italy, and the Nazi Party movement in Germany. Huxley had always been concerned about threats to man's freedom and independence. He realized **that communism and fascism place the state above the individual and demand total allegiance to a cause**. Recognizing the danger, he demonstrated the end result of this tendency in his fantasy.

Some Definitions And Allusions

A number of references, names, and allusions in *Brave New World* could be missed by the casual reader. Huxley draws upon his own extensive background in history, economics, and science and often assumes the reader is immediately aware of the significance of a particular word. Some of the more important of these words and concepts are discussed below.

- **CONDITIONING** is defined as the training of an individual to respond to a stimulus in a particular way. The great Russian scientist Pavlov conducted experiments to determine how this conditioning takes place. Further experimentation has proven that individuals can be conditioned to respond in a predetermined way. In *Brave New World* **individuals are conditioned to think, act, feel, believe, and respond the way the government wants them to**.

- **PREDESTINATION** is the act of deciding an individual's fate or destiny for him. *Both the Old and New Testaments contain allusions to God as the Predestinator, but since the World State has eliminated God, predestination is now the function of a government bureau*. **In the World State each individual has been predestined according to the needs of society**.

- **THOMAS R. MALTHUS** (the Malthusian belt) was an English political economist who propounded a doctrine on the theory of population. He believed that unless famine or was diminished the population, in time the means of life would be inadequate. In the World State, mandatory birth-control measures are used to regulate the growth of population.

- The character **FORD** was the most important figure in the formation of the World State. *In a Christian society, the life, work, and teachings of Christ are the source of inspiration and truth; conversely, in Huxley's Utopia the life, work, and teachings of Ford are the sources of inspiration and truth*. Even time is reckoned according to Ford.

- **A.F. 632** is the year when these events take place. Since Huxley had projected his fantasy six hundred years into the future, by our reckoning the year would be approximately 2532 A.D.

- **DECANTING** is the name given to the completion of the artificial and mechanical stimulation of the embryo resulting in what we would call birth - an independent existence. Huxley details this process to emphasize the tremendous advancement of scientific knowledge and practice and to *show the complete control of the individual by The State from the time of conception*.

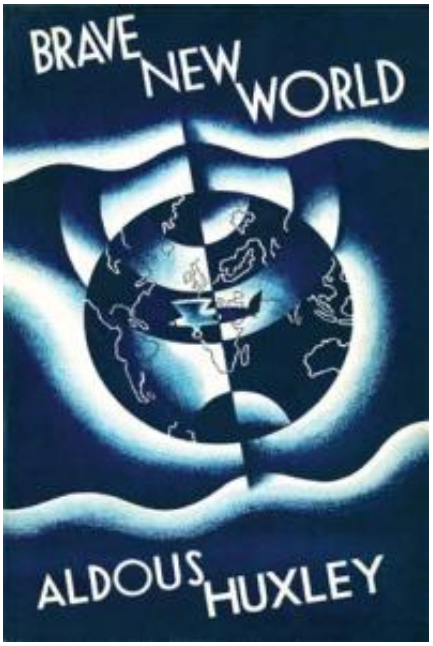
Theme of Brave New World

In his foreword to the New Harper edition of *Brave New World*, Huxley states its theme as "the advancement of science as it affects human individuals." In any single ten-year period since 1900, the advances in science and technology have overshadowed the advancement made during any previous hundred-year period. Huxley realized that these advances which were almost universally hailed as progress were fraught with danger. Man had built higher than he could climb; man had unleashed power he was unable to control.

Brave New World is Huxley's warning; it is his attempt to make man realize that since knowledge is power, he who controls and uses knowledge wields the power. Science and technology should be the servants of man - man should not be adapted and enslaved to them. Brave New World is a description of our lives as they could be in the none too distant future, if the present obsessions persist for World State standardization and control according to the sciences - eugenics and psychology, as well as economics and mechanics.

Chapter: Chapter One

The novel opens with the Director of Hatcheries and Conditioning taking a group of students on a tour of the "Central London Hatching and Conditioning Centre." We notice that the World State's motto is "Community, Identity, Stability." These are nice-sounding words designed to mislead. To achieve “community, identity, and stability,” the World State would operate out of a desire for absolute control and conformity in social, political, and personal matters. **A World State requires a single political ideology and a single point of view**. Citizens are forced to conform to the political party ideology of the one party in control of the World State. The first part of the book discusses in detail how this stable society was established and is maintained.



Excerpt from

Brave New World

By Aldous Huxley

Chapter I

A squat grey building of only thirty-four storeys. Over the main entrance the words, **Central London Hatchery and Conditioning Centre**, and, in a shield, the World State's motto, *Community, Identity, Stability*.

The enormous room on the ground floor faced towards the north. Cold for all the summer beyond the panes, for all the tropical heat of the room itself, a harsh thin light glared through the windows, hungrily seeking some draped lay figure, some pallid shape of academic goose-flesh, but finding only the glass and nickel and bleakly shining porcelain of a laboratory. Wintriness responded to wintriness. The overalls of the workers were white, their hands gloved with a pale corpse-coloured rubber. The light was frozen, dead, a ghost. Only from the yellow barrels of the microscopes did it borrow a certain rich and living substance, lying along the polished tubes like butter, streak after luscious streak in long recession down the work tables.

'And this,' said the Director opening the door, 'is the **Fertilizing Room**.'

Bent over their instruments, *three hundred Fertilizers* were plunged, as the Director of Hatcheries and Conditioning entered the room, in the scarcely breathing silence, the absentminded, soliloquizing hum or whistle, of absorbed concentration. *A troop of newly arrived students*, very young, pink and callow, followed nervously, rather abjectly, at the Director's heels. Each of them carried a note-book, in which, whenever the great man spoke, he desperately scribbled. Straight from the horse's mouth. It was a rare privilege. The DHC for Central London always made a point of personally conducting his new students round the various departments.

'Just to give you a general idea,' he would explain to them. For of course some sort of general idea they must have, if they were to do their work intelligently — though as little of one, if they were to be good and happy members of society, as possible. For particulars, as everyone knows, make for virtue and happiness; generalities are intellectually necessary evils. Not philosophers, but fret-sawyers and stamp collectors compose the backbone of society.

'Tomorrow,' he would add, smiling at them with a slightly menacing geniality, 'you'll be settling down to serious work. You won't have time for generalities. Meanwhile . . .'

Meanwhile, it was a privilege. Straight from the horse's mouth into the note-book. The boys scribbled like mad.

Tall and rather thin but upright, the Director advanced into the room. He had a long chin and big, rather prominent teeth, just covered, when he was not talking, by his full, floridly curved lips. Old, young?

Thirty? fifty? fifty-five? It was hard to say. And anyhow the question didn't arise; in this **year of stability, a.f. 632**, it didn't occur to you to ask it.

'I shall begin at the beginning,' said the DHC, and the more zealous students recorded his intention in their note-books: *Begin at the beginning*. 'These,' he waved his hand, 'are the **incubators**.' And opening an insulated door he showed them racks upon racks of numbered test-tubes. 'The week's supply of ova. Kept,' he explained, 'at blood heat; whereas the male gametes,' and here he opened another door, 'they have to be kept at thirty-five instead of thirty-seven. Full blood heat sterilizes.' Rams wrapped in thermogene beget no lambs.

Still leaning against the incubators he gave them, while the pencils scurried illegibly across the pages, a brief description of the **modern fertilizing process**; spoke first, of course, of its surgical introduction — 'the operation undergone voluntarily for the good of Society, not to mention the fact that it carries a bonus amounting to six months' salary'; continued with some account of the technique for preserving the excised ovary alive and actively developing; passed on to a consideration of optimum temperature, salinity, viscosity; referred to the liquor in which the detached and ripened eggs were kept; and, leading his charges to the work tables, actually showed them how the liquor was drawn off from the test-tubes; how it was let out drop by drop on to the specially warmed slides of the microscopes; how the eggs which it contained were inspected for abnormalities, counted and transferred to a porous receptacle; how (and he now took them to watch the operation) this receptacle was immersed in a warm bouillon containing free-swimming spermatozoa — at a minimum concentration of one hundred thousand per cubic centimetre, he insisted; and how, after ten minutes, the container was lifted out of the liquor and its contents re-examined; how, if any of the eggs remained unfertilized, it was again immersed, and, if necessary, yet again; how the fertilized ova went back to the incubators; where the **Alphas and Betas** remained until definitely bottled; while the **Gammas, Deltas and Epsilons** were brought out again, after only thirty-six hours, to undergo **Bokanovsky's Process**.[1]

'Bokanovsky's Process,' repeated the Director, and the students underlined the words in their little note-books.

One egg, one embryo, one adult — normality. But a **bokanovskified egg** will bud, will proliferate, will divide. From eight to ninety-six buds, and every bud will grow into a perfectly formed embryo, and every embryo into a full-sized adult. Making ninety-six human beings grow where only one grew before. **Progress**.

'Essentially,' the DHC concluded, 'bokanovskification consists of a series of arrests of development. We check the normal growth and, paradoxically enough, the egg responds by budding.'

Responds by budding. The pencils were busy.

He pointed. On a very slowly moving band a rack-full of test-tubes was entering a large metal box, another rack-full was emerging. Machinery faintly purred. It took eight minutes for the tubes to go through, he told them. Eight minutes of hard X-rays being about as much as an egg can stand. A few died; of the rest, the least susceptible divided into two; most put out four buds; some eight; all were returned to the incubators, where the buds began to develop; then, after two days, were suddenly chilled, chilled and checked. Two, four, eight, the buds in their turn budded; and having budded were

[1] Alpha, Beta, Gamma, Delta, and Epsilon signify the different 'social castes' of the fertilized eggs.

dosed almost to death with alcohol; consequently burgeoned again and having budded — bud out of bud out of bud were thereafter — further arrest being generally fatal — left to develop in peace. ***By which time the original egg was in a fair way to becoming anything from eight to ninety-six embryos*** — a prodigious improvement, you will agree, on nature. **Identical twins** — but not in piddling twos and threes as in the old viviparous days, when an egg would sometimes accidentally divide; actually by dozens, by scores at a time.

'**Scores**,' the Director repeated and flung out his arms, as though he were distributing largesse. 'Scores.'

But one of the students was fool enough to ask where the advantage lay.

'My good boy!' The Director wheeled sharply round on him. 'Can't you see? Can't you see?' He raised a hand; his expression was solemn. 'Bokanovsky's Process is one of the major instruments of social stability!'

Major instruments of social stability.

Standard men and women; in uniform batches. The whole of a small factory staffed with the products of a single bokanovskified egg.

'Ninety-six identical twins working ninety-six identical machines!' The voice was almost tremulous with enthusiasm.

'You really know where you are. For the first time in history.' He quoted the planetary motto. 'Community, Identity, Stability.' Grand words. 'If we could bokanovskify indefinitely the whole problem would be solved.'

Solved by standard Gammas, unvarying Deltas, uniform Epsilons. Millions of identical twins. The principle of **mass production** at last applied to biology.

'But, alas,' the Director shook his head. 'we can't bokanovskify indefinitely.'

Ninety-six seemed to be the limit; seventy-two a good average. From the same ovary and with gametes of the same male to manufacture as many batches of identical twins as possible — that was the best (sadly a second best) that they could do. And even that was difficult.

'For in nature it takes thirty years for two hundred eggs to reach maturity. But our business is to stabilize the population at this moment, here and now. Dribbling out twins over a quarter of a century — what would be the use of that?'

Obviously, no use at all. But Podsnap's Technique had immensely accelerated the process of ripening. They could make sure of at least a hundred and fifty mature eggs within two years. Fertilize and bokanovskify — in other words, multiply by seventy-two — and **you get an average of nearly eleven thousand brothers and sisters** in a hundred and fifty batches of identical twins, **all within two years of the same age.**

‘And in exceptional cases we can make one ovary yield us over fifteen thousand adult individuals.’

Beckoning to a fair-haired, ruddy young man who happened to be passing at the moment, ‘Mr Foster,’ he called. The ruddy young man approached. ‘Can you tell us the record for a single ovary, Mr Foster?’

‘**Sixteen thousand and twelve in this Centre**,’ Mr Foster replied without hesitation. He spoke very quickly, had a vivacious blue eye, and took an evident pleasure in quoting figures. ‘Sixteen thousand and twelve; in one hundred and eighty-nine batches of identicals. But of course they’ve done much better,’ he rattled on, ‘in some of the tropical Centres. Singapore has often produced over sixteen thousand five hundred; and Mombasa has actually touched the seventeen thousand mark. But then they have unfair advantages. You should see the way a negro ovary responds to pituitary! It’s quite astonishing, when you’re used to working with European material. Still,’ he added, with a laugh (but the light of combat was in his eyes and the lift of his chin was challenging), ‘still, we mean to beat them if we can. I’m working on a wonderful Delta-Minus ovary at this moment. Only just eighteen months old. Over twelve thousand seven hundred children already, either decanted or in embryo. And still going strong. We’ll beat them yet.’

‘That’s the spirit I like!’ cried the Director, and clapped Mr Foster on the shoulder. ‘Come along with us and give these boys the benefit of your expert knowledge.’

Mr Foster smiled modestly. ‘With pleasure.’ They went.

In the **Bottling Room** all was harmonious bustle and ordered activity. Flaps of fresh sow’s peritoneum ready cut to the proper size came shooting up in little lifts from the Organ Store in the sub-basement.[2] Whizz and then, click! the lift-hatches flew open; the Bottle-Liner had only to reach out a hand, take the flap, insert, smooth-down, and before the lined bottle had had time to travel out of reach along the endless band, whizz, click! another flap of peritoneum had shot up from the depths, ready to be slipped into yet another bottle, the next of that slow interminable procession on the band.

Next to the Liners stood the Matriculators. The procession advanced; one by one the eggs were transferred from their test-tubes to the larger containers; deftly the peritoneal lining was slit, the morula dropped into place, the saline solution poured in . . . and already the bottle had passed, and it was the turn of the labellers. Heredity, date of fertilization, membership of Bokanovsky Group — details were transferred from test-tube to bottle. No longer anonymous, but named, identified, the procession marched slowly on; on through an opening in the wall, slowly on into the **Social Predestination Room**.[3]

‘Eighty-eight cubic metres of card-index,’ said Mr Foster with relish, as they entered.

‘Containing *all* the relevant information,’ added the Director.

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[2] Peritoneum is the transparent membrane that lines the abdominal cavity in mammals. Therefore, this means that pre-cut pieces of fresh pig gut lining are being used to grow the embryos.

[3] In the Social Predestination Room, each embryo’s future place in the caste system is determined. Alpha and Beta embryos will become the leaders and professionals of society, while Delta, Gamma and Epsilons will perform the routine and manual tasks needed to 'maintain social stability.' The three lower castes are subjected to a process that lowers intelligence but increases the incidence of twins, making for more willing workers for performance of low-end jobs.

‘Brought up to date every morning.’

‘And co-ordinated every afternoon.’

‘On the basis of which they make their calculations.’

‘So many individuals, of such and such quality,’ said Mr Foster.

‘Distributed in such and such quantities.’

‘The optimum **Decanting Rate** at any given moment.’[4]

‘Unforeseen wastages promptly made good.’

‘Promptly,’ repeated Mr Foster. ‘If you knew the amount of overtime I had to put in after the last Japanese earthquake!’ He laughed good-humouredly and shook his head.

‘The Predestinators send in their figures to the Fertilizers.’

‘Who give them the embryos they ask for.’

‘And the bottles come in here to be predestinated in detail.’

‘After which they are sent down to the Embryo Store.’

‘Where we now proceed ourselves.’

And opening a door Mr Foster led the way down a staircase into the basement.

The temperature was still tropical. They descended into a thickening twilight. Two doors and a passage with a double turn ensured the cellar against any possible infiltration of the day.

‘Embryos are like photograph film,’ said Mr Foster waggishly, as he pushed open the second door. ‘They can only stand red light.’

And in effect the sultry darkness into which the students now followed him was visible and crimson, like the darkness of closed eyes on a summer’s afternoon. The bulging flanks of row on receding row and tier above tier of bottles glinted with innumerable rubies, and among the rubies moved the dim red spectres of men and women with purple eyes and all the symptoms of lupus. The hum and rattle of machinery faintly stirred the air.

‘Give them a few figures, Mr Foster,’ said the Director, who was tired of talking.

Mr Foster was only too happy to give them a few figures.

[4] The term “decanting” is used to describe pouring babies out of the bottles they were gestated in; it's the equivalent of birth.

Two hundred and twenty metres long, two hundred wide, ten high. He pointed upwards. Like chickens drinking, the students lifted their eyes towards the distant ceiling.

Three tiers of racks; ground-floor level, first gallery, second gallery.

The spidery steelwork of gallery above gallery faded away in all directions into the dark. Near them three red ghosts were busily unloading demijohns from a moving staircase.

The escalator from the **Social Predestination Room**.

Each bottle could be placed on one of fifteen racks, each rack, though you couldn't see it, was a conveyor travelling at the rate of thirty-three and a third centimetres an hour. Two hundred and sixty-seven days at eight metres a day. Two thousand one hundred and thirty-six metres in all. One circuit of the cellar at ground level, one on the first gallery, half on the second, and on the two hundred and sixty-seventh morning, daylight in the Decanting Room. Independent existence — so called.

'But in the interval,' Mr Foster concluded, 'we've managed to do a lot to them. Oh, a very great deal.' His laugh was knowing and triumphant.

'That's the spirit I like,' said the Director once more. 'Let's walk round. You tell them everything, Mr Foster.'

Mr Foster duly told them.

Told them of the growing embryo on its bed of peritoneum. Made them taste the rich blood surrogate on which it fed. Explained why it had to be stimulated with placentin and thyroxin. Told them of the corpus luteum extract. Showed them the jets through which at every twelfth metre from zero to 2040 it was automatically injected. Spoke of those gradually increasing doses of pituitary administered during the final ninety-six metres of their course. Described the artificial maternal circulation installed in every bottle at Metre 112; showed them the reservoir of blood-surrogate, the centrifugal pump that kept the liquid moving over the placenta and drove it through the synthetic lung and waste product filter. Referred to the embryo's troublesome tendency to anaemia, to the massive doses of hog's stomach extract and foetal foal's liver with which, in consequence, it had to be supplied. Showed them the simple mechanism by means of which, during the last two metres out of every eight, all the embryos were simultaneously shaken into familiarity with movement. Hinted at the gravity of the so-called "trauma of decanting," and enumerated the precautions taken to minimize, by a suitable training of the bottled embryo, that dangerous shock. Told them of the test for sex carried out in the neighborhood of Metre 200. Explained the system of labelling-a T for the males, a circle for the females and for those who were destined to become freemartins a question mark, black on a white ground.

"For of course," said Mr. Foster, "in the vast majority of cases, fertility is merely a nuisance. One fertile ovary in twelve hundred-that would really be quite sufficient for our purposes. But we want to have a good choice. And of course one must always have an enormous margin of safety. So **we allow as many as thirty per cent of the female embryos to develop normall**y. **The others get a dose of male sex-hormone every twenty-four metres** for the rest of the course. Result: they're decanted as freemartins-structurally quite normal (except," he had to admit, "that they do have the slightest tendency to grow beards), but sterile.

Guaranteed sterile. Which brings us at last," continued Mr. Foster, "out of the realm of mere slavish imitation of nature into the much more interesting world of human invention."

He rubbed his hands. For of course, they didn't content themselves with merely hatching out embryos: any cow could do that.

"We also **predestine and condition**. We decant our babies as socialized human beings, as Alphas or Epsilons, as future sewage workers or future ..." He was going to say "future World controllers," but correcting himself, said "future Directors of Hatcheries," instead.

The D.H.C. acknowledged the compliment with a smile.

They were passing Metre 320 on Rack 11. A young Beta-Minus mechanic was busy with screwdriver and spanner on the blood-surrogate pump of a passing bottle. The hum of the electric motor deepened by fractions of a tone as he turned the nuts. Down, down ... A final twist, a glance at the revolution counter, and he was done. He moved two paces down the line and began the same process on the next pump.

"Reducing the number of revolutions per minute," Mr. Foster explained.

"The surrogate goes round slower; therefore passes through the lung at longer intervals; therefore gives the embryo less oxygen. **Nothing like oxygen-shortage for keeping an embryo below par**." Again he rubbed his hands.

"But why do you want to keep the embryo below par?" asked an ingenuous student.

"Ass!" said the Director, breaking a long silence. "Hasn't it occurred to you that an Epsilon embryo must have an Epsilon environment as well as an Epsilon heredity?"

It evidently hadn't occurred to him. He was covered with confusion.

"**The lower the caste**," said Mr. Foster, "**the shorter the oxygen**." *The first organ affected was the brain. After that the skeleton. At seventy per cent of normal oxygen you got dwarfs. At less than seventy eyeless monsters.*

"Who are no use at all," concluded Mr. Foster.

Whereas (his voice became confidential and eager), if they could discover a technique for shortening the period of maturation what a triumph, what a benefaction to Society!

"Consider the horse."

They considered it.

Mature at six; the elephant at ten. While at thirteen a man is not yet sexually mature; and is only full-grown at twenty. Hence, of course, that fruit of delayed development, the human intelligence.

"But **in Epsilons**," said Mr. Foster very justly, "**we don't need human intelligence**."

Didn't need and didn't get it. But though the Epsilon mind was mature at ten, the Epsilon body was not fit to work till eighteen. Long years of superfluous and wasted immaturity. If the physical development could be speeded up till it was as quick, say, as a cow's, what an enormous saving to the Community!

"Enormous!" murmured the students. Mr. Foster's enthusiasm was infectious.

He became rather technical; spoke of the abnormal endocrine coordination which made men grow so slowly; postulated a germinal mutation to account for it. Could the effects of this germinal mutation be undone? Could the individual Epsilon embryo be made a revert, by a suitable technique, to the normality of dogs and cows? That was the problem. And it was all but solved.

Pilkington, at Mombasa, had produced individuals who were sexually mature at four and full-grown at six and a half. A scientific triumph.

But socially useless. Six-year-old men and women were too stupid to do even Epsilon work. And the process was an all-or-nothing one; either you failed to modify at all, or else you modified the whole way.

They were still trying to find the ideal compromise between adults of twenty and adults of six. So far without success. Mr. Foster sighed and shook his head.

Their wanderings through the crimson twilight had brought them to the neighborhood of Metre 170 on Rack 9. From this point onwards Rack 9 was enclosed and the bottle performed the remainder of their

journey in a kind of tunnel, interrupted here and there by openings two or three metres wide.

"Heat conditioning," said Mr. Foster.

Hot tunnels alternated with cool tunnels. Coolness was wedded to discomfort in the form of hard X-rays. By the time they were decanted the embryos had a horror of cold. They were predestined to emigrate to the tropics, to be miner and acetate silk spinners and steel workers.

Later on, their minds would be made to endorse the judgment of their bodies. "We condition them to thrive on heat," concluded Mr. Foster.

"Our colleagues upstairs will teach them to love it."

"And that," put in the Director sententiously, "that **is the secret of happiness and virtue** - ***liking what you've got to do***. **All conditioning aims at that: making people like their unescapable social destiny**."

In a gap between two tunnels, a nurse was delicately probing with a long fine syringe into the gelatinous contents of a passing bottle. The students and their guides stood watching her for a few moments in silence.

"Well, Lenina," said Mr. Foster, when at last she withdrew the syringe and straightened herself up.

The girl turned with a start. One could see that, for all the lupus and the purple eyes, she was uncommonly pretty.

"Henry!" Her smile flashed redly at him-a row of coral teeth.

"Charming, charming," murmured the Director and, giving her two or three little pats, received in exchange a rather deferential smile for himself.

“What are you giving them?" asked Mr. Foster, making his tone very professional.

"Oh, the usual typhoid and sleeping sickness."

"Tropical workers start being inoculated at Metre 150," Mr. Foster explained to the students. "The embryos still have gills. We immunize the fish against the future man's diseases." Then, turning back to Lenina, "Ten to five on the roof this afternoon," he said, "as usual."

"Charming," said the Director once more, and, with a final pat, moved away after the others.

On Rack 10 rows of next generation's chemical workers were being trained in the toleration of lead, caustic soda, tar, chlorine. The first of a batch of two hundred and fifty embryonic rocket-plane engineers was just passing the eleven hundred metre mark on Rack 3. A special mechanism kept their containers in constant rotation. "To improve their sense of balance," Mr. Foster explained. "Doing repairs on the outside of a rocket in mid-air is a ticklish job. We slacken off the circulation when they're right way up, so that they're half starved, and double the flow of surrogate when they're upside down. They learn to associate topsy-turvydom with well-being; in fact, they're only truly happy when they're standing on their heads.

"And now," Mr. Foster went on, "I'd like to show you some very interesting conditioning for **Alpha Plus** Intellectuals. We have a big batch of them on Rack 5. First Gallery level," he called to two boys who had started to go down to the ground floor.

"They're round about Metre 900," he explained. "You can't really do any useful intellectual conditioning till the foetuses have lost their tails. Follow me."

But the Director had looked at his watch. "Ten to three," he said. "No time for the intellectual embryos, I'm afraid. We must go up to the Nurseries before the children have finished their afternoon sleep."

Mr. Foster was disappointed. "At least one glance at the Decanting Room," he pleaded.

"Very well then." The Director smiled indulgently. "Just one glance."

Chapter Two

MR. FOSTER was left in the Decanting Room. The D.H.C. and his students stepped into the nearest lift and were carried up to the fifth floor.

INFANT NURSERIES. **NEO-PAVLOVIAN CONDITIONING ROOMS**, announced the notice board.

The Director opened a door. They were in a large bare room, very bright and sunny; for the whole of the southern wall was a single window. Half a dozen nurses, trousered and jacketed in the regulation white viscose-linen uniform, their hair aseptically hidden under white caps, were engaged in setting out bowls of roses in a long row across the floor. Big bowls, packed tight with blossom. Thousands of petals, ripe-blown and silkily smooth, like the cheeks of innumerable little cherubs, but of cherubs, in that bright

light, not exclusively pink and Aryan, but also luminously Chinese, also Mexican, also apoplectic with too much blowing of celestial trumpets, also pale as death, pale with the posthumous whiteness of marble.

The nurses stiffened to attention as the D.H.C. came in.

"Set out the books," he said curtly.

In silence the nurses obeyed his command. Between the rose bowls the books were duly set out–a row of nursery quartos opened invitingly each at some gaily coloured image of beast or fish or bird.

"Now bring in the children."

They hurried out of the room and returned in a minute or two, each pushing a kind of tall dumb-waiter laden, on all its four wire-netted shelves, with **eight-month-old babies**, all exactly alike (a Bokanovsky Group, it was evident) and all (since their **caste** was Delta) dressed in khaki.

"Put them down on the floor."

The infants were unloaded.

"Now turn them so that they can see **the flowers and books**."

Turned, the babies at once fell silent, then began to crawl towards those clusters of sleek colours, those shapes so gay and brilliant on the white pages. As they approached, the sun came out of a momentary eclipse behind a cloud. The roses flamed up as though with a sudden passion from within; a new and profound significance seemed to suffuse the shining pages of the books. From the ranks of the crawling babies came little squeals of excitement, gurgles and twitterings of pleasure.

The Director rubbed his hands. "Excellent!" he said. "It might almost have been done on purpose."

The swiftest crawlers were already at their goal. Small hands reached out uncertainly, touched, grasped, unpetaling the transfigured roses, crumpling the illuminated pages of the books. The Director waited until all were happily busy. Then, "Watch carefully," he said. And, lifting his hand, he gave the signal.

The Head Nurse, who was standing by a switchboard at the other end of the room, pressed down a little **lever**.

There was a **violent explosion**. Shriller and ever shriller, a siren shrieked. **Alarm bells** maddeningly sounded.

The children started, screamed; their faces were distorted with terror.

"And now," the Director shouted (for the noise was deafening), "now we proceed to rub in the lesson with a **mild electric shock**."

He waved his hand again, and the Head Nurse pressed a second lever. The screaming of the babies suddenly changed its tone. There was something **desperate, almost insane**, about the sharp spasmodic yelps to which they now gave utterance. Their little bodies twitched and stiffened; their limbs moved jerkily as if to the tug of unseen wires.

"We can electrify that whole strip of floor," bawled the Director in explanation. "But that's enough," he signaled to the nurse.

The explosions ceased, the bells stopped ringing, the shriek of the siren died down from tone to tone into silence. The stiffly twitching bodies relaxed, and what had become the **sob and yelp of infant maniacs** broadened out once more into a normal howl of ordinary terror.

"*Offer them the flowers and the books again*."

The nurses obeyed; but at the approach of the roses, at the mere sight of those gaily-coloured images of pussy and cock-a-doodle-doo and baa-baa black sheep, the infants shrank away in horror, the volume of their howling suddenly increased.

"Observe," said the Director triumphantly, "observe."

Books and loud noises, flowers and electric shocks–already in the infant mind these couples were compromisingly linked; and after two hundred repetitions of the same or a similar lesson would be wedded indissolubly. What man has joined, nature is powerless to put asunder.

"**They'll grow up with what the psychologists used to call an 'instinctive' hatred of books and flowers. Reflexes unalterably conditioned. They'll be safe from books and botany all their lives**." The Director turned to his nurses. "Take them away again."

Still yelling, the khaki babies were loaded on to their dumb-waiters and wheeled out, leaving behind them the smell of sour milk and a most welcome silence.

One of the students held up his hand; and though he could see quite well why you couldn't have lower-cast people wasting the Community's time over books, and that there was always the risk of their reading something which might undesirably decondition one of their reflexes, yet … well, he couldn't understand about the flowers. *Why go to the trouble of making it psychologically impossible for Deltas to like flowers?*

Patiently the D.H.C. explained. If the children were made to scream at the sight of a rose, that was on grounds of high economic policy. Not so very long ago (a century or thereabouts), **Gammas, Deltas, even Epsilons**, had been conditioned to like flowers–flowers in particular and wild nature in general. The idea was to make them want to be going out into the country at every available opportunity, and so compel them to consume transport.

"And didn't they consume transport?" asked the student.

"Quite a lot," the D.H.C. replied. "But nothing else."

Primroses and landscapes, he pointed out, have one grave defect: they are gratuitous. **A love of nature keeps no factories busy. It was decided to abolish the love of nature**, at any rate among the lower classes; to abolish the love of nature, but *not* the tendency to consume transport. For of course it was essential that they should keep on going to the country, even though they hated it. The problem was to find an economically sounder reason for consuming transport than a mere affection for primroses and landscapes. It was duly found.

"*We condition the masses to hate the country*," concluded the Director. "But simultaneously we condition them to love all country sports. At the same time, we see to it that all country sports shall entail the use of elaborate apparatus. So that they consume manufactured articles as well as transport. Hence those electric shocks."

"I see," said the student, and was silent, lost in admiration.

There was a silence; then, clearing his throat, "Once upon a time," the Director began, "while our Ford was still on earth, there was a little boy called **Reuben Rabinovitch**. Reuben was the child of Polish-speaking parents."

The Director interrupted himself. "You know what Polish is, I suppose?"

"A dead language."

"Like French and German," added another student, officiously showing off his learning.

"And '**parent**'?" questioned the D.H.C.

There was an uneasy silence. Several of the boys blushed. They had not yet learned to draw the significant but often very fine distinction between smut and pure science. One, at last, had the courage to raise a hand.

"Human beings used to be …" he hesitated; the blood rushed to his cheeks. "Well, they used to be viviparous."

"Quite right." The Director nodded approvingly.

"And **when the babies were decanted** …"

"'Born,'" came the correction.

"Well, then they were the parents–I mean, not the babies, of course; the other ones." The poor boy was overwhelmed with confusion.

"In brief," the Director summed up, "**the parents were the father and the mother**." The smut that was really science fell with a crash into the boys' eye-avoiding silence. "**Mother**," he repeated loudly rubbing in the science; and, leaning back in his chair, "**These," he said gravely, "are unpleasant facts**; I know it. But then most historical facts are unpleasant."

He returned to Little Reuben–to Little Reuben, in whose room, one evening, by an oversight, his father and mother (crash, crash!) happened to leave the radio turned on.

("*For you must remember that in those days of gross viviparous reproduction, children were always brought up by their parents and not in State Conditioning Centres*.")

While the child was asleep, a broadcast programme from London suddenly started to come through; and the next morning, to the astonishment of his crash and crash (the more daring of the boys ventured to grin at one another), Little Reuben woke up repeating word for word a long lecture by that curious old writer ("one of the very few whose works have been permitted to come down to us"), George Bernard Shaw, who was speaking, according to a well-authenticated tradition, about his own genius. To Little Reuben's wink and snigger, this lecture was, of course, perfectly incomprehensible and, imagining that their child had suddenly gone mad, they sent for a doctor. He, fortunately, understood English, recognized the discourse as that which Shaw had broadcasted the previous evening, realized the significance of what had happened, and sent a letter to the medical press about it.

"The **principle of sleep-teaching**, or hypnopædia, had been discovered." The D.H.C. made an impressive pause.

The principle had been discovered; but many, many years were to elapse before that principle was usefully applied.

"The case of Little Reuben occurred only twenty-three years after **Our Ford's first T-Model** was put on the market." (Here the **Director made a sign of the T on his stomach** and all the students reverently followed suit.) "And yet …"

Furiously the students scribbled. "*Hypnopædia, first used officially in A.F. 214. Why not before? Two reasons. (a) …*"

"These early experimenters," the D.H.C. was saying, "were on the wrong track. They thought that hypnopædia could be made an instrument of intellectual education …"

[A small boy asleep on his right side, the right arm stuck out, the right hand hanging limp over the edge of the bed. Through a round grating in the side of a box a voice speaks softly.

"The Nile is the longest river in Africa and the second in length of all the rivers of the globe. Although falling short of the length of the Mississippi-Missouri, the Nile is at the head of all rivers as regards the length of its basin, which extends through 35 degrees of latitude …"

At breakfast the next morning, "Tommy," some one says, "do you know which is the longest river in Africa?" A shaking of the head. "But don't you remember something that begins: The Nile is the …"

"The - Nile - is - the - longest - river - in - Africa - and - the - second - in - length - of - all - the - rivers - of - the - globe …" The words come rushing out. "Although - falling - short - of …"

"Well now, which is the longest river in Africa?"

The eyes are blank. "I don't know."

"But the Nile, Tommy."

"The - Nile - is - the - longest - river - in - Africa - and - second …"

"Then which river is the longest, Tommy?"

Tommy burst into tears. "I don't know," he howls.]

That howl, the Director made it plain, discouraged the earliest investigators. **The experiments were abandoned**. No further attempt was made to teach children the length of the Nile in their sleep. Quite rightly. You can't learn a science unless you know what it's all about.

"Whereas, if they'd only started on *moral* education," said the Director, leading the way towards the door. The students followed him, desperately scribbling as they walked and all the way up in the lift. "Moral education, which ought never, in any circumstances, to be rational."

"Silence, silence," whispered a loud speaker as they stepped out at the fourteenth floor, and "Silence, silence," the trumpet mouths indefatigably repeated at intervals down every corridor. The students and even the Director himself rose automatically to the tips of their toes. They were Alphas, of course, but

even Alphas have been well conditioned. "Silence, silence." All the air of the fourteenth floor was sibilant with the categorical imperative.

Fifty yards of tiptoeing brought them to a door which the Director cautiously opened. They stepped over the threshold into the twilight of a shuttered dormitory. Eighty cots stood in a row against the wall. There was a sound of light regular breathing and a continuous murmur, as of very faint voices remotely whispering.

A nurse rose as they entered and came to attention before the Director.

"What's the lesson this afternoon?" he asked.

"We had **Elementary Sex** for the first forty minutes," she answered. "But now it's switched over to **Elementary Class Consciousness**."

The Director walked slowly down the long line of cots. Rosy and relaxed with sleep, eighty little boys and girls lay softly breathing. There was a whisper under every pillow. The D.H.C. halted and, bending over one of the little beds, listened attentively.

"**Elementary Class Consciousness**, did you say? Let's have it repeated a little louder by the trumpet."

At the end of the room a loud speaker projected from the wall. The Director walked up to it and pressed a switch.

"… all wear green," said a soft but very distinct voice, beginning in the middle of a sentence, "and Delta Children wear khaki. Oh no, I don't want to play with **Delta** children. And **Epsilons** are still worse. They're too stupid to be able to read or write. Besides they wear black, which is such a beastly colour. I'm *so* glad I'm a **Beta**."

There was a pause; then the voice began again.

"**Alpha** children wear grey They work much harder than we do, because they're so frightfully clever. I'm really awfuly glad I'm a Beta, because I don't work so hard. And then we are much better than the Gammas and Deltas. Gammas are stupid. They all wear green, and Delta children wear khaki. Oh no, I *don't* want to play with Delta children. And Epsilons are still worse. They're too stupid to be able …"

The Director pushed back the switch. The voice was silent. Only its thin ghost continued to mutter from beneath the eighty pillows.

"They'll have that repeated **forty or fifty times more before they wake**; then again on Thursday, and again on Saturday. A hundred and twenty times three times a week for thirty months. After which they go on to a more advanced lesson."

Roses and electric shocks, the khaki of Deltas and a whiff of asafœtida–wedded indissolubly before the child can speak. But wordless conditioning is crude and wholesale; cannot bring home the finer distinctions, cannot inculcate the more complex courses of behaviour. For that there must be words, but words without reason. In brief, hypnopædia.

"***The greatest moralizing and socializing force of all time***."

The students took it down in their little books. Straight from the horse's mouth.

Once more the Director touched the switch.

"… so frightfully clever," the soft, insinuating, indefatigable voice was saying, "I'm really awfully glad I'm a Beta, because …"

Not so much like drops of water, though water, it is true, can wear holes in the hardest granite; rather, drops of liquid sealing-wax, drops that adhere, incrust, incorporate themselves with what they fall on, till finally the rock is all one scarlet blob.

"*Till at last the child's mind **is** these suggestions, and the sum of the suggestions is the child's mind.* And not the child's mind only. The adult's mind too–all his life long. The mind that judges and desires and decides–made up of these suggestions. But all these suggestions are *our* suggestions!" The Director almost shouted in his triumph. "**Suggestions from The State**." He banged the nearest table. "It therefore follows …"

A noise made him turn round.

"Oh, Ford!" he said in another tone, "I've gone and woken the children."

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