ALSO BY ALDOUS HUXLEY

Novels

Crome Yellow
Antic Hay
Those Barren Leaves
Point Counter Point
Eyeless in Gaza
After Many a Summer Time
Must Have a Stop
Ape and Essence
The Genius and the Goddess
Island

Short Stories

Limbo
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Two or Three Graces
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(Collected Short Stories)

Biography

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Poetry and Drama

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The Gioconda Smile

Essays and Belles Lettres

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For Children

The Crows of Pearblossom

ALDOUS HUXLEY

Brave New World

WITH AN INTRODUCTION BY
Yuval Noah Harari

VINTAGE

All things considered, it looks as though Utopia were far closer to us than anyone, only fifteen years ago, could have imagined. Then, I projected it six hundred years into the future. Today it seems quite possible that the horror may be upon us within a single century. That is, if we refrain from blowing ourselves to smithereens in the interval. Indeed, unless we choose to decentralize and to use applied science, not as the end to which human beings are to be made the means, but as the means to producing a race of free individuals, we have only two alternatives to choose from: either a number of national, militarized totalitarianisms, having as their root the terror of the atomic bomb and as their consequence the destruction of civilization (or, if the warfare is limited, the perpetuation of militarism); or else one supra-national totalitarianism, called into existence by the social chaos resulting from rapid technological progress in general and the atom revolution in particular, and developing, under the need for efficiency and stability, into the welfare-tyranny of Utopia. You pays your money and you takes your choice.

Aldous Huxley, 1946

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.

'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 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. 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.

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

'Containing *all* the relevant information,' added the Director.

'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.'

'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.

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 on every bottle at metres 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 tests for sex carried out in the neighbourhood of metre 200. Explained the system of labelling – a T for the males,