

Chapter One

A SQUAT grey building of only thirty-four stories. 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 absent-minded, 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 notebook, in which, whenever the great man spoke, he desperately scribbled. Straight from the horse's mouth. It was a rare privilege. The D. H. C. 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 every one knows,

make for virtue and happiness; generalities are intellectually necessary evils. Not philosophers but fret-sawyers and stamp collectors compose the backbone of society.

"To-morrow," 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 notebook. 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 D.H.C. and the more zealous students recorded his intention in their notebooks: 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 theremogene 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 this liquor was drawn off from the test-tubes; how it was let out drop by drop onto 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 notebooks.

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 D.H.C. 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 boganovskify-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 hew 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 predestined 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 insured 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 steel-work 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 traveling 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 around. 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 normally. 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 fu-

ture ..." 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 screw-driver 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 Sixteen

THE ROOM into which the three were ushered was the Controller's study.

"His fordship will be down in a moment." The Gamma butler left them to themselves.

Helmholtz laughed aloud.

"It's more like a caffeine-solution party than a trial," he said, and let himself fall into the most luxurious of the pneumatic arm-chairs. "Cheer up, Bernard," he added, catching sight of his friend's green unhappy face. But Bernard would not be cheered; without answering, without even looking at Helmholtz, he went and sat down on the most uncomfortable chair in the room, carefully chosen in the obscure hope of somehow deprecating the wrath of the higher powers.

The Savage meanwhile wandered restlessly round the room, peering with a vague superficial inquisitiveness at the books in the shelves, at the sound-track rolls and reading machine bobbins in their numbered pigeon-holes. On the table under the window lay a massive volume bound in limp black leather-surrogate, and stamped with large golden T's. He picked it up and opened it. MY LIFE AND WORK, BY OUR FORD. The book had been published at Detroit by the Society for the Propa-

gation of Fordian Knowledge. Idly he turned the pages, read a sentence here, a paragraph there, and had just come to the conclusion that the book didn't interest him, when the door opened, and the Resident World Controller for Western Europe walked briskly into the room.

Mustapha Mond shook hands with all three of them; but it was to the Savage that he addressed himself. "So you don't much like civilization, Mr. Savage," he said.

The Savage looked at him. He had been prepared to lie, to bluster, to remain sullenly unresponsive; but, reassured by the good-humoured

intelligence of the Controller's face, he decided to tell the truth, straightforwardly. "No." He shook his head.

Bernard started and looked horrified. What would the Controller think? To be labelled as the friend of a man who said that he didn't like civilization-said it openly and, of all people, to the Controller-it was terrible. "But, John," he began. A look from Mustapha Mond reduced him to an abject silence.

"Of course," the Savage went on to admit, "there are some very nice things. All that music in the air, for instance ..."

"Sometimes a thousand twangling instruments will hum about my ears and sometimes voices."

The Savage's face lit up with a sudden pleasure. "Have you read it too?" he asked. "I thought nobody knew about that book here, in England."

"Almost nobody. I'm one of the very few. It's prohibited, you see. But as I make the laws here, I can also break them. With impunity, Mr. Marx," he added, turning to Bernard. "Which I'm afraid you can't do."

Bernard sank into a yet more hopeless misery.

"But why is it prohibited?" asked the Savage. In the excitement of meeting a man who had read Shakespeare he had momentarily forgotten everything else.

The Controller shrugged his shoulders. "Because it's old; that's the chief reason. We haven't any use for old things here."

"Even when they're beautiful?"

"Particularly when they're beautiful. Beauty's attractive, and we don't want people to be attracted by old things. We want them to like the new ones."

"But the new ones are so stupid and horrible. Those plays, where there's nothing but helicopters flying about and you feel the people kissing." He made a grimace. "Goats and monkeys!" Only in Othello's word could he

find an adequate vehicle for his contempt and hatred.

"Nice tame animals, anyhow," the Controller murmured parenthetically.

"Why don't you let them see Othello instead?"

"I've told you; it's old. Besides, they couldn't understand it."

Yes, that was true. He remembered how Helmholtz had laughed at Romeo and Juliet. "Well then," he said, after a pause, "something new that's like Othello, and that they could understand."

"That's what we've all been wanting to write," said Helmholtz, breaking a long silence.

"And it's what you never will write," said the Controller. "Because, if it were really like Othello nobody could understand it, however new it might be. And if were new, it couldn't possibly be like Othello."

"Why not?"

"Yes, why not?" Helmholtz repeated. He too was forgetting the unpleasant realities of the situation. Green with anxiety and apprehension, only Bernard remembered them; the others ignored him. "Why not?"

"Because our world is not the same as Othello's world. You can't make flivvers without steel-and you can't make tragedies without social instability. The world's stable now. People are happy; they get what they want, and they never want what they can't get. They're well off; they're safe; they're never ill; they're not afraid of death; they're blissfully ignorant of passion and old age; they're plagued with no mothers

or fathers; they've got no wives, or children, or lovers to feel strongly about; they're so conditioned that they practically can't help behaving as they ought to behave. And if anything should go wrong, there's soma. Which you go and chuck out of the window in the name of liberty, Mr. Savage. Liberty!" He laughed. "Expecting Deltas to know what liberty is! And now expecting them to understand Othello! My good boy!"

The Savage was silent for a little. "All the same," he insisted obstinately, "Othello's good, Othello's better than those feelies."

"Of course it is," the Controller agreed. "But that's the price we have to pay for stability. You've got to choose between happiness and what people used to call high art. We've sacrificed the high art. We have the feelies and the scent organ instead."

"But they don't mean anything."

"They mean themselves; they mean a lot of agreeable sensations to the audience."

"But they're ... they're told by an idiot."

The Controller laughed. "You're not being very polite to your friend, Mr. Watson. One of our most distinguished Emotional Engineers ..."

"But he's right," said Helmholtz gloomily. "Because it is idiotic. Writing when there's nothing to say ..."

"Precisely. But that requires the most enormous ingenuity. You're making flivvers out of the absolute minimum of steel-works of art out of practically nothing but pure sensation."

The Savage shook his head. "It all seems to me quite horrible."

"Of course it does. Actual happiness always looks pretty squalid in comparison with the over-compensations for misery. And, of course, stability isn't nearly so spectacular as instability. And being contented has none of the glamour of a good fight against misfortune, none of the picturesqueness of a struggle with temptation, or a fatal overthrow by passion or doubt. Happiness is never grand."

"I suppose not," said the Savage after a silence. "But need it be quite so bad as those twins?" He passed his hand over his eyes as though he were trying to wipe away the remembered image of those long rows of identical midgets at the assembling tables, those queued-up twin-herds at the entrance to the Brentford monorail station, those human maggots swarming round Linda's bed of death, the endlessly repeated face of his

assailants. He looked at his bandaged left hand and shuddered.
"Horrible!"

"But how useful! I see you don't like our Bokanovsky Groups; but, I assure you, they're the foundation on which everything else is built. They're the gyroscope that stabilizes the rocket plane of state on its unswerving course." The deep voice thrillingly vibrated; the gesticulating hand implied all space and the onrush of the irresistible machine. Mustapha Mond's oratory was almost up to synthetic standards.

"I was wondering," said the Savage, "why you had them at all-seeing that you can get whatever you want out of those bottles. Why don't you make everybody an Alpha Double Plus while you're about it?"

Mustapha Mond laughed. "Because we have no wish to have our throats cut," he answered. "We believe in happiness and stability. A society of Alphas couldn't fail to be unstable and miserable. Imagine a factory staffed by Alphas-that is to say by separate and unrelated individuals of good heredity and conditioned so as to be capable (within limits) of making a free choice and assuming responsibilities. Imagine it!" he repeated.

The Savage tried to imagine it, not very successfully.

"It's an absurdity. An Alpha-decanted, Alpha-conditioned man would go mad if he had to do Epsilon Semi-Moron work-go mad, or start smashing things up. Alphas can be completely socialized-but only on condition that you make them do Alpha work. Only an Epsilon can be expected to make Epsilon sacrifices, for the good reason that for him they aren't sacrifices; they're the line of least resistance. His conditioning has laid down rails along which he's got to run. He can't help himself; he's foredoomed. Even after decanting, he's still inside a bottle-an invisible bottle of infantile and embryonic fixations. Each one of us, of course," the Controller meditatively continued, "goes through life inside a bottle. But if we happen to be Alphas, our bottles are, rela-

tively speaking, enormous. We should suffer acutely if we were confined in a narrower space. You cannot pour upper-caste champagne-surrogate into lower-caste bottles. It's obvious theoretically. But it has also been

proved in actual practice. The result of the Cyprus experiment was convincing."

"What was that?" asked the Savage.

Mustapha Mond smiled. "Well, you can call it an experiment in rebotting if you like. It began in A.F. 473. The Controllers had the island of Cyprus cleared of all its existing inhabitants and re-colonized with a specially prepared batch of twenty-two thousand Alphas. All agricultural and industrial equipment was handed over to them and they were left to manage their own affairs. The result exactly fulfilled all the theoretical predictions. The land wasn't properly worked; there were strikes in all the factories; the laws were set at naught, orders disobeyed; all the people detailed for a spell of low-grade work were perpetually intriguing for high-grade jobs, and all the people with high-grade jobs were counter-intriguing at all costs to stay where they were. Within six years they were having a first-class civil war. When nineteen out of the twenty-two thousand had been killed, the survivors unanimously petitioned the World Controllers to resume the government of the island. Which they did. And that was the end of the only society of Alphas that the world has ever seen."

The Savage sighed, profoundly.

"The optimum population," said Mustapha Mond, "is modelled on the iceberg-eight-ninths below the water line, one-ninth above."

"And they're happy below the water line?"

"Happier than above it. Happier than your friend here, for example." He pointed.

"In spite of that awful work?"

"Awful? They don't find it so. On the contrary, they like it. It's light, it's childishly simple. No strain on the mind or the muscles. Seven and a half hours of mild, unexhausting labour, and then the soma ration and games and unrestricted copulation and the feelies. What more can they ask for? True," he added, "they might ask for shorter hours. And

of course we could give them shorter hours. Technically, it would be perfectly simple to reduce all lower-caste working hours to three or four a day. But would they be any the happier for that? No, they wouldn't. The experiment was tried, more than a century and a half ago. The whole of Ireland was put on to the four-hour day. What was the result? Unrest and a large increase in the consumption of soma; that was all. Those three and a half hours of extra leisure were so far from being a source of happiness, that people felt constrained to take a holiday from them. The Inventions Office is stuffed with plans for labour-saving processes. Thousands of them." Mustapha Mond made a lavish gesture. "And why don't we put them into execution? For the sake of the labourers; it would be sheer cruelty to afflict them with excessive leisure. It's the same with agriculture. We could synthesize every morsel of food, if we wanted to. But we don't. We prefer to keep a third of the population on the land. For their own sakes-because it takes longer to get food out of the land than out of a factory. Besides, we have our stability to think of. We don't want to change. Every change is a menace to stability. That's another reason why we're so chary of applying new inventions. Every discovery in pure science is potentially subversive; even science must sometimes be treated as a possible enemy. Yes, even science."

Science? The Savage frowned. He knew the word. But what it exactly signified he could not say. Shakespeare and the old men of the pueblo had never mentioned science, and from Linda he had only gathered the vaguest hints: science was something you made helicopters with, something that caused you to laugh at the Corn Dances, something that prevented you from being wrinkled and losing your teeth. He made a desperate effort to take the Controller's meaning.

"Yes," Mustapha Mond was saying, "that's another item in the cost of stability. It isn't only art that's incompatible with happiness; it's also science. Science is dangerous; we have to keep it most carefully chained and muzzled."

"What?" said Helmholtz, in astonishment. "But we're always saying that science is everything. It's a hypnopædic platitude."

"Three times a week between thirteen and seventeen," put in Bernard.

"And all the science propaganda we do at the College ..."

"Yes; but what sort of science?" asked Mustapha Mond sarcastically. "You've had no scientific training, so you can't judge. I was a pretty good physicist in my time. Too good-good enough to realize that all our science is just a cookery book, with an orthodox theory of cooking that nobody's allowed to question, and a list of recipes that mustn't be added to except by special permission from the head cook. I'm the head cook now. But I was an inquisitive young scullion once. I started doing a bit of cooking on my own. Unorthodox cooking, illicit cooking. A bit of real science, in fact." He was silent.

"What happened?" asked Helmholtz Watson.

The Controller sighed. "Very nearly what's going to happen to you young men. I was on the point of being sent to an island."

The words galvanized Bernard into violent and unseemly activity. "Send me to an island?" He jumped up, ran across the room, and stood gesticulating in front of the Controller. "You can't send me. I haven't done anything. It was the others. I swear it was the others." He pointed accusingly to Helmholtz and the Savage. "Oh, please don't send me to Iceland. I promise I'll do what I ought to do. Give me another chance. Please give me another chance." The tears began to flow. "I tell you, it's their fault," he sobbed. "And not to Iceland. Oh please, your lordship, please ..." And in a paroxysm of abjection he threw himself on his knees before the Controller. Mustapha Mond tried to make him get up; but Bernard persisted in his grovelling; the stream of words poured out inexhaustibly. In the end the Controller had to ring for his fourth secretary.

"Bring three men," he ordered, "and take Mr. Marx into a bedroom. Give him a good soma vaporization and then put him to bed and leave him."

The fourth secretary went out and returned with three green-uniformed twin footmen. Still shouting and sobbing. Bernard was carried out.

"One would think he was going to have his throat cut," said the Controller, as the door closed. "Whereas, if he had the smallest sense, he'd understand that his punishment is really a reward. He's being sent to

an island. That's to say, he's being sent to a place where he'll meet the most interesting set of men and women to be found anywhere in the world. All the people who, for one reason or another, have got too selfconsciously individual to fit into community-life. All the people who aren't satisfied with orthodoxy, who've got independent ideas of their own. Every one, in a word, who's any one. I almost envy you, Mr. Watson."

Helmholtz laughed. "Then why aren't you on an island yourself?"

"Because, finally, I preferred this," the Controller answered. "I was given the choice: to be sent to an island, where I could have got on with my pure science, or to be taken on to the Controllers' Council with the prospect of succeeding in due course to an actual Controllership. I chose this and let the science go." After a little silence, "Sometimes," he added, "I rather regret the science. Happiness is a hard master-particularly other people's happiness. A much harder master, if one isn't conditioned to accept it unquestioningly, than truth." He sighed, fell silent again, then continued in a brisker tone, "Well, duty's duty. One can't consult one's own preference. I'm interested in truth, I like science. But truth's a menace, science is a public danger. As dangerous as it's been beneficent. It has given us the stablest equilibrium in history. China's was hopelessly insecure by comparison; even the primitive matriarchies weren't steadier than we are. Thanks, I repeat, to science. But we can't allow science to undo its own good work. That's why we so carefully limit the scope of its researches-that's why I almost got sent to an island. We don't allow it to deal with any but the most immediate problems of the moment. All other enquiries are most sedulously discouraged. It's curious," he went on after a little pause, "to read what people in the time of Our Ford used to write about scientific progress. They seemed to have imagined that it could be allowed to go on indefinitely, regardless of everything else. Knowledge was the highest good, truth the supreme value; all the rest was secondary and subordinate. True, ideas were beginning to change even then. Our Ford himself did a great deal to shift the emphasis from truth and beauty to comfort and happiness. Mass production demanded the shift. Universal happiness keeps the wheels steadily turning; truth and beauty can't. And, of course, whenever the masses seized political power, then it was happiness rather than truth and beauty that mattered. Still, in spite

of everything, unrestricted scientific research was still permitted. People still went on talking about truth and beauty as though they

were the sovereign goods. Right up to the time of the Nine Years' War. That made them change their tune all right. What's the point of truth or beauty or knowledge when the anthrax bombs are popping all around you? That was when science first began to be controlled-after the Nine Years' War. People were ready to have even their appetites controlled then. Anything for a quiet life. We've gone on controlling ever since. It hasn't been very good for truth, of course. But it's been very good for happiness. One can't have something for nothing. Happiness has got to be paid for. You're paying for it, Mr. Watson-paying because you happen to be too much interested in beauty. I was too much interested in truth; I paid too."

"But you didn't go to an island," said the Savage, breaking a long silence.

The Controller smiled. "That's how I paid. By choosing to serve happiness. Other people's-not mine. It's lucky," he added, after a pause, "that there are such a lot of islands in the world. I don't know what we should do without them. Put you all in the lethal chamber, I suppose. By the way, Mr. Watson, would you like a tropical climate? The Marquesas, for example; or Samoa? Or something rather more bracing?"

Helmholtz rose from his pneumatic chair. "I should like a thoroughly bad climate," he answered. "I believe one would write better if the climate were bad. If there were a lot of wind and storms, for example ..."

The Controller nodded his approbation. "I like your spirit, Mr. Watson. I like it very much indeed. As much as I officially disapprove of it." He smiled. "What about the Falkland Islands?"

"Yes, I think that will do," Helmholtz answered. "And now, if you don't mind, I'll go and see how poor Bernard's getting on."