

## SCIENTIFIC TERMINOLOGY AND ITS INTERPRETATION IN THE NOVEL BRAVE NEW WORLD BY ALDOUS HUXLEY

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### Abstract

The paper on “Scientific Terminology and its interpretation in the novel BRAVE NEW WORLD by Aldous Huxley” focuses on the use of scientific terminology by the author to suit the theme of the novel in a very distinct way. Huxley, with his own scientific background has created such a fantasy world, which is desired by all in the material sense, but the hollowness of the scientific world is compared with the mention of the primitive world too. The reader of the science fiction, while going through the novel, has to cultivate the habit of reading and interpreting the terminology using all his knowledge of science studied so far, or has to take help of the scientific dictionary to understand what actually the author wants to say. The present paper is one attempt to find out the unique meanings attached to the scientific words so as to create a society which reflect the concepts in the novel to the best of their meanings. The jargons are added to intensify the complexities of life when Nature is challenged and science is absorbed in every phase of life. The novel best supports the supremacy of Nature.

“Scientific Terminology and its interpretation in the novel BRAVE NEW WORLD by Aldous Huxley”

Dystopian fiction is the natural correlative of utopian mode of literature and presents visions of imaginary worlds in which the worst of all possible social conditions pertains and where all ethical, aesthetic and metaphysical judgments are consequently problematised. The development from utopian harmony to dystopian dissonance is a crucial one, as it provides us with a context not only within which to place the production of the work of art but also within which to read it. The turning of a dream into a nightmare coincides with a period of great social and scientific change, which impinged upon romantic idealizations of the future. Developments in the physical and biological sciences, which had their roots in the work of evolutionary theorists of the mid-nineteenth century, impacted upon new social sciences such as sociology and psychology, which were beginning to come to the fore by century's end. Robert Elliott sums up gradual disenchantment with utopianism very effectively:

"By the nineteenth century, Western man's fantastically successfully command over nature by means of science and his faith in the inevitability of progress made it seem that utopia – the good society, the good life for man – was a necessary consequence of present historical processes. The presses groaned under the weight of projects"

The two most famous anti-utopias of the twentieth century, Huxley's *Brave New World* and Orwell's *Nineteen Eighty Four*, were both written by men who had at least as much of the utopian as the anti-utopian temperament in their makeup. Their anti-utopias are born of a sense of frustrated and thwarted utopianism. Neither in their individual life nor in the world at large do they see any prospect of the utopia they do desperately wish for. The anti-utopia is for them a kind of angry revenge against their own foolish hopes, a back-handed compliment to the noble but deluded purposes of utopia. Since the time of More's *Utopia*, the anti-utopia – the formal reversal of the promise of happiness in utopia – has been a literary and intellectual possibility. But it was no until the nineteenth century that much was made of this possibility. Till then, the anti-utopia, though generally recognizable as a distorted reflection of utopia, tended to appear as a variety of the order form of satire. This was reasonable enough as satire holds together both negative (anti-utopian) and positive (utopian) elements. It criticizes, through ridicule and invective, its own times, while pointing – usually implicitly but sometimes explicitly – to alternative and better ways of living. Eventually, the literary forms of utopia and anti-utopia were to pull these two elements apart, assigning those to separate genres, or sub-genres. Utopia itself has kept live this dual concern, refusing to hand over entirely to anti-utopia the negative side of the human nature and society. Most commonly, the anti-utopia appears as the existing contemporary society, to which the author offers his utopia as a solution to present ills and discontents. Anti-utopia draws its energy from the failure of utopian hopes and aspirations. In *Frankenstein*, the utopian promise of 'the perfectibility of man' ends in the nightmare of 'a malignant devil' that ravages the world. And, as Mary Shelley shows, such a sequence is not contingent or accidental but follows from the logic of the utopian attempt. Benjamin Disraeli saw in the high hopes in technical progress the moral flaw at the centre of a society 'which has mistaken comfort for civilization'. For Kierkegaard and Nietzsche, nineteenth century culture was promoting the victory of mediocrity and the dominance of a mechanical, utilitarian, philosophy, crushing out all passion and spirituality. What was common to all these philosophies, what united their critics over all other differences, was a scientific determinism that seemed intent on driving out any concept of individual will and individual freedom. From the late nineteenth century onwards, the negative and positive poles of the old satirical utopia were pulled apart and assigned to separate genres or subgenres.

What the reader requires while reading such dystopian works is the knowledge of scientific terminology, new concepts of science and engineering, new branches of medical science and drugs, even the reading of *Upanishads* and such ancient religious and philosophical books, they require to read and understand the social structure of various society and should better know their terminology as the author wants them to be interpreted. It would show that what was within the sight of men was also within their grasp, if only they would reach for it.

Authors sometimes referred by name or in some other obvious way to what they perceived to be the enemy.

Huxley went furthest in naming practically all the characters of “Brave New World”, after his chief bêtes noires. Brave New World is a ‘novel of the future’ and might be described as the reverse of the Wellsian model. Huxley’s Utopia, like that of Wells, ‘doesn’t stink enough’, and besides being hygienically odourless, is in other respects modelled largely upon it Wellsian prototype; the difference between Men Like Gods and Brave New World lies chiefly in the point of view of the two writers. For Huxley, the Wellsian Utopia, far from being a desirable state of affairs, represents the triumph of all that he fears and dislikes the most: for it is a world in which humanity has been dehumanized, a world in which scientific “progress” has been produced, so to speak, to the nth degree. Mr. Scogan’s prophecy in Crome Yellow has been more than fulfilled: babies are incubated in bottles and a system of strictly scientific conditioning ensures that each individual shall perform automatically his allotted function within the community. It is a totalitarian and a quasi – theocratic world : its ‘Gods’ are Marx and Henry Ford (occasionally our Freud); in an artificially inseminated society the most obscene word is “mother” and hygiene has become the ultimate moral value. Here in the above mentioned lines, the readers may get a stop or confusion if they are not thoroughly aware about the terminology like CONDITIONING or INSEMINATED or TOTALITARIAN GOVERNMENT, equally there might be question why Marx and Freud are considered to be Gods, why the word Mother the purest of all relation is the obscene word? Such questions will be answered when refers to the chemical or bio-chemical dictionary, psychological and social terminology dictionary, history or anthropological dictionary. Here the words and their meaning are not only attached superficially but they need reading of all the branches just mentioned and above all the imagination of the readers. The theme is developed with inexorable logic and with much of Huxley’s characteristically ironic humour; the end, however, is tragic – the story culminates with the suicide of a ‘savage’ imported from one of the few native reservations, where life remains on a purely primitive level. Aldous Huxley elaborates a little nature of the book to be written:

“A synthesis there undoubtedly must be, a thought – bridge that would permit the mind to march discursively and logically from telepathy to the four – dimensional continuum from poltergeists and departed spirits to the physiology of the nervous system. And beyond the happenings of the séance room, there were the events in the oratory and the meditation hall”.

Combining conversation with narration is always a difficult task for a novelist. Dialogues are necessary for a vivid and life-like presentation. And yet they have to be supported by “he said”, “she said”, which are like graceless wooden props disfiguring the smoothness of the surface. To overcome this difficulty, Huxley has resorted to contrapunctual dialogues. The following passage will serve to illustrate the device. The Director of Hatchery and conditioning and his assistant Mr. Foster are explaining the process to young students :

“Eighty-eight cubic metres of care-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 after-noon”.

On account of these features Henderson regards the novel as :

“an amazing tour-de-force of criss-crossing dialogues and narrative”.

According to him,

“His intersection of planes, this polyphonic interweaving of voices gives an extraordinary richness to the prose”

It is clear that the brilliant performance is not mere verbal craftsmanship. It is the result of a rich intellect combing itself with glowing imagination. Although, Huxley respects the spiritual values underlying religion, formal religion is very often a subject of parody with him. Religious rites are often performed in a soulless and mechanical manner and therefore, become a proper target for the satirist.

Huxley’s style points up many facts of his satire. He can be blandly acquiescent in enormities, guide our responses with dry, ironic asides, and add ouch of just noticeable exaggeration. Thus structure of the book is necessary adapted to convey the satire.

In the novel, both the lines and the irony are appropriate to a character to be introduced later on, but the irony should be remembered throughout by the reader. “Brave” has its old sense of “splendid” rather than courageous. One would say that the book was about a Utopia if it were not that a line of dreamers have given that originally noncommittal term a sense of imagined perfection Brave New World (1932) is one of the most bewitching and insidious works of literature ever written. It has come to serve as the false symbol for any regime of universal happiness. So how does Huxley turn a future where we're all notionally happy into the archetypal dystopia? If it's technically feasible, what's wrong with using biotechnology to get rid of mental pain altogether?

Brave New World is an unsettling, loveless and even sinister place. This is because Huxley endows his "ideal" society with features calculated to alienate his audience. Typically, reading BRAVE NEW WORLD elicits the very same disturbing feelings in the reader which the society it depicts has notionally vanquished - not a sense of joyful anticipation. In the era of post-genomic medicine, our DNA is likely to be spliced and edited so we can all enjoy life-long bliss, awesome peak experiences, and a spectrum of outrageously good designer-drugs. Nor does Huxley's comparatively sympathetic account of the life of the Savage on the Reservation convey just how nasty the old regime of pain, disease and unhappiness can be. If you think it does, then you enjoy an enviably sheltered life and an enviably cozy imagination. For it's all sugar-coated pseudo-realism. In Brave New World, Huxley contrives to exploit the anxieties of his bourgeois audience about both Soviet Communism and Fordist American capitalism. He taps into, and then feeds, our revulsion at Pavlovian-style behavioural conditioning and eugenics. Worse, it is suggested that the price of universal happiness will be the sacrifice of the most hallowed shibboleths of our culture: "motherhood", "home", "family", "freedom", even "love". The exchange yields an insipid happiness that's unworthy of the name. Its evocation arouses our unease and distaste.

In BRAVE NEW WORLD, happiness derives from consuming mass-produced goods, sports such as Obstacle Golf and Centrifugal Bumble-puppy, promiscuous sex, "the feelies", and most famously of all, a supposedly perfect pleasure-drug, soma. BRAVE NEW WORLD is often

taken as a pessimistic warning of the dangers of runaway science and technology. Scientific progress, however, was apparently frozen with the advent of a world state. Thus ironically it's not perverse to interpret BRAVE NEW WORLD as a warning of what happens when scientific inquiry is suppressed. One of the reasons why many relatively robust optimists - including some dopamine-driven transhumanists - dislike Brave New World, and accordingly distrust the prospect of universal happiness it symbolises, is that their primary source of everyday aversive experience is boredom. BRAVE NEW WORLD comes across as a stagnant civilisation. It's got immovably stuck in a severely sub-optimal state. Its inhabitants are too contented living in their rut to extricate themselves and progress to higher things. Superficially, yes, Brave New World is a technocratic society. Yet the free flow of ideas and criticism central to science is absent. Moreover the humanities have withered too. Subversive works of literature are banned. Subtly but inexorably, BRAVE NEW WORLD enforces conformity in innumerable different ways. Its conformism feeds the popular misconception that a life-time of happiness will be boring - even when the biochemical substrates of boredom have vanished. As perfect pleasure-drugs go, soma underwhelms. For a start, soma is a very one-dimensional euphoriant. It gives rise to only a shallow, unempathetic and intellectually uninteresting well-being. Apparently, taking soma doesn't give Bernard Marx, the disaffected sleep-learning specialist, more than a cheap thrill. Nor does it make him happy with his station in life. John the Savage commits suicide soon after taking soma [guilt and despair born of serotonin depletion!?!]. The drug is said to be better than (promiscuous) sex - the only sex Brave New Worlders practise. But a regimen of soma doesn't deliver anything sublime or life-enriching. It doesn't catalyse any mystical epiphanies, intellectual breakthroughs or life-defining insights. It doesn't in any way promote personal growth. Instead, soma provides a mindless, inauthentic "imbecile happiness" - a vacuous escapism which makes people comfortable with their lack of freedom. The drug heightens suggestibility, leaving its users vulnerable to government propaganda. Soma is a narcotic that raises "a quite impenetrable wall between the actual universe and their minds."

If Huxley had wished to tantalise, rather than repel, emotional primitives like us with the biological nirvana soon in prospect, then he could have envisaged utopian wonder-drugs which reinforced or enriched our most cherished ideals. In our imaginations, perhaps we might have been allowed - via chemically-enriched Brave New Worlders - to turn ourselves into idealised versions of the sort of people we'd most like to be. In this scenario, behavioural conditioning, too, could have been used by the utopians to sustain, rather than undermine, a more sympathetic ethos of civilized society and a life well led. Likewise, biotechnology could have been exploited in BRAVE NEW WORLD to encode life-long fulfilment and super-intellec[t]s for everyone - instead of manufacturing a rigid hierarchy of genetically preordained castes. For Huxley does an effective hatchet-job on the very sort of "unnatural" hedonic engineering that most of us so urgently need. One practical consequence has been to heighten our already exaggerated fears of state-sanctioned mood-drugs. Hence millions of screwed-up minds, improvable even today by clinically-tested mood-boosters and anti-anxiety agents, just suffer in silence instead. In part this is because people worry they might become zombified addicts; and in part because they are unwilling to cast themselves as humble supplicants of the medical profession by taking state-rationed "antidepressants". Either way, the human cost in fruitless ill-being is immense. Fortunately, the Net is opening up a vast trans-national free-market in psychotropics. It will eventually sweep away the restrictive practices of old medical drug cartels and their allies in the pharmaceutical industry. The liberatory potential of the Net as a global

drug-delivery and information network has only just begun. Of course, Huxley can't personally be blamed for prolonging the pain of the old Darwinian order of natural selection. Citing the ill-effects of *Brave New World* is not the same as impugning its author's motives. Aldous Huxley was a deeply humane person as well as a brilliant polymath. He himself suffered terribly after the death of his adored mother. But death and suffering will be cured only by the application of bioscience. They won't be abolished by spirituality, prophetic sci-fi, or literary intellectualism. In future, it will be feasible technically - at the very least - for pharmacotherapy and genetic medicine to re-engineer us so that we can become - to take one example among billions - a cross between Jesus and Einstein. Potentially, transhumans will be endowed with a greater capacity for love, empathy and emotional depth than anything neurochemically accessible today. Our selfish-gene-driven ancestors - in common with the cartoonish *Brave New Worlders* - will strike posterity as functional psychopaths by comparison; and posterity will be right.

In contrast to *Brave New World*, however, the death of ageing won't be followed by our swift demise after a sixty odd year life-span. We'll have to reconcile ourselves to the prospect of living happily ever after. Scare-mongering prophets of doom notwithstanding, a life of unremitting bliss isn't nearly as bad as it sounds. The good news gets better. Drugs - not least the magical trinity of empathogens, entactogens and entheogens - and eventually genetic engineering will open up revolutionary new state spaces of thought and emotion. In later life, Huxley himself modified his antipathy to drug-assisted paradise. *Island* (1962), Huxley's conception of a real utopia, was modelled on his experiences of mescaline and LSD. But until we get the biological underpinnings of our emotional well-being securely encoded genetically, then psychedelia is mostly off-limits for the purposes of paradise-engineering. Certainly, its intellectual significance cannot be exaggerated; but unfortunately, neither can its ineffable weirdness and the unpredictability of its agents. Thus mescaline, and certainly LSD and its congeners, are not fail-safe euphoriant. To cap it all, in *Brave New World*, life-long emotional well-being is not genetically pre-programmed as part of everyday mental health. It isn't even assured from birth by euphoriant drugs. For example, juvenile *Brave New Worlders* are traumatised with electric shocks as part of the behaviorist-inspired conditioning process in childhood. Toddlers from the lower orders are terrorised with loud noises. This sort of aversion-therapy serves to condition them against liking books. We are told the inhabitants of *Brave New World* are happy. Yet they periodically experience unpleasant thoughts, feelings and emotions. They just banish them with soma: "One cubic centimetre cures ten gloomy sentiments". In *Brave New World*, there is no depth of feeling, no ferment of ideas, and no artistic creativity. Individuality is suppressed. Intellectual excitement and discovery have been abolished. Its inhabitants are laboratory-grown clones, bottled and standardised from the hatchery. They are conditioned and indoctrinated, and even brainwashed in their sleep. The utopians are never educated to prize thinking for themselves. In *Brave New World*, the twin goals of happiness and stability - both social and personal - are not just prized but effectively equated. This surprisingly common notion is ill-conceived. The impregnable well-being of our trans-human descendants is more likely to promote greater diversity, both personal and societal, not stagnation. This is because greater happiness, and in particular enhanced dopamine function, doesn't merely extend the depth of one's motivation to act: the hyper-dopaminergic sense of things to be done. It also broadens the range of stimuli an organism finds rewarding. By expanding the range of potential activities we enjoy, enhanced dopamine function will ensure we will be less likely to get stuck in a depressive rut. This rut leads to the kind of learned helplessness that says nothing will do any good, Nature

will take its revenge, and utopias will always go wrong. More specifically; in chemical terms, very crudely, dopaminergics fortify one's will-power, mu-opioids enhance one's happiness, while certain serotonergics can deepen one's empathy and social conscience. Safe, long-lasting site-specific hybrids will do both. Richer designer cocktails spiced with added ingredients will be far better still. It is tempting to conceptualise such cocktails in terms of our current knowledge of, say, oxytocin, phenylethylamine, substance P antagonists, selective mu-opioid agonists and enkephalinase-inhibitors etc. But this is probably naïve. Post-synaptic receptor antagonists block their psychoactive effects, suggesting it's the postsynaptic intra-cellular cascades they trigger which form the heartlands of the soul. Our inner depths haven't yet been properly explored, let alone genetically re-regulated. But our ignorance and inertia are receding fast. Molecular neuroscience and behavioural genetics are proceeding at dizzying pace. Better Living Through Chemistry doesn't have to be just a snappy slogan. We can bootstrap our way into becoming smart and happy while biologically deepening our social conscience too. Hopefully, the need for manifestos and ideological propaganda will pass. They must be replaced by an international biomedical research program of paradise-engineering. The fun hasn't even begun. The moral urgency is immense. If desired, too, designer drugs can be used to trigger paroxysms of spiritual enlightenment - or at least the phenomenology thereof - transcending the ecstasies of the holiest mystic or the hyper-religiosity of a temporal-lobe epileptic. So future psychoactives needn't yield only the ersatz happiness of a Brave New Worlder, nor will euphoriant abuse be followed by the proverbial Dark Night of the Soul. Just so long as neurotransmitter activation of the right subreceptors triggers the right post-synaptic intra-cellular cascades regulated by the right alleles of the right genes in the right way indefinitely - and this is a technical problem with a technical solution - then we have paradise everlasting, at worst. It will be vastly more enjoyable to boot. Even though we find the nature of BRAVE NEW WORLD-issue "soma" as elusive as its Vedic ancestor, we think we can imagine, more-or-less, what taking "soma" might be like; and judge accordingly. Within limits, plain "uppers" and "downers" are intelligible to us in their effects, though even here our semantic competence is debatable - right now, it's hard to imagine what terms like "torture" and "ecstasy" really denote. When talking about drugs with (in one sense) more far-reaching effects, however, it's easy to lapse into gibbering nonsense. If one has never taken a particular drug, then one's conception of its distinctive nature derives from analogy with familiar agents, or from its behavioural effects on other people, not on the particular effects its use typically exerts on the texture of consciousness. One may be confident that other people are using the term in the same way only in virtue of their physiological similarity to oneself, not through any set of operationally defined criteria. Thus until one has tried a drug, it's hard to understand what one is praising or condemning. In BRAVE NEW WORLD, genetic engineering isn't used straightforwardly to pre-code happiness. Instead, it underwrites the subordination and inferiority of the lower orders. In essence, Brave New World is a global caste society. Social stratification is institutionalised in a five-way genetic split. There is no social mobility. Alphas invariably rule, Epsilons invariably toil. Genetic differences are reinforced by systematic conditioning. Historically, dominance and winning have been associated with good, even manically euphoric, mood; losing and submission are associated with subdued spirits and depression. Rank theory suggests that the far greater incidence of the internalised correlate of the yielding sub-routine, depression, reflects how low spirits were frequently more adaptive among group-living organisms than manic self-assertion. But in Brave New World, the correlation vanishes or is even inverted. The lower orders are at least as happy as the Alphas thanks to soma, childhood conditioning and their brain-damaged incapacity for original thought. Thus in sleep-

lessons on class consciousness, for instance, juvenile Betas learn to love being Betas. They learn to respect Alphas who "work much harder than we do, because they're so frightfully clever." But they also learn to take pleasure in not being Gammas, Deltas, or the even more witless Epsilons. "Oh no," the hypnopedia tapes suggest, "I don't want to play with Delta children."

The Controller Mustapha Mond informs us that an all-Alpha society was once tried on an island. The result of the experiment was civil war. 19 000 of the 22 000 Alphas perished. Thus the lower castes are needed indefinitely. The happiness that they derive from their routine-bound lives guarantees stability for society as a whole. "The optimum population", the Controller observes, "is modelled on the iceberg - eight-ninths below the waterline, one-ninth above". In the last analysis, Nature Knows Best.

Thus, *Brave New World* is regarded as Huxley's most remarkable achievement with reference to style and diction. He was faced herewith the difficult task of projecting a new world and a new human situation. Huxley has eminently succeeded in the task of presenting the atmosphere and the problems of this new world with altogether a new terminology. The atmosphere of this brave new world is created by cinematic shots having hardly the length of a page, and dialogues are so skilfully interwoven with these that narration and conversation fuse together to give a vivid impression of the setting and the psychology involved.

Henderson has made a detailed study of this feature of Huxley's style and the high praise he offers deserves to be quoted:

"Without a single word of direct description, the sensation of a world of wheels continually turning, of an endless hum, and click of machinery, is powerfully conveyed, almost, it seems, direct to the actual nerves and sensibilities of the reader. It is difficult to realize that the impression is being made entirely by indirect means, so powerful it is. And yet the dialogue contains nothing but fragmentary statements concerning the techniques of "*Brave New World*" set side by side, with expressions of emotion, both contemporary and Pre-Fordian".

#### Reference

1. "Modern and Otherwise"- Sisirkumar Ghose- 1974- D.K. Publishing House, Delhi
2. "Aldous Huxley" Longman Group Ltd. Ese. Jocelyn Brooke (1972)
3. Mann George, *The Mammoth Encyclopaedia of Science Fiction*, Constable & Robinson Ltd., London, 2001.
4. Cuddon J.A., *Dictionary of Literary Terms and Literary Theory*, Penguin Books, 1999.
5. Huxley Aldous, *Brave New World*, Vintage 2004, London, 1932.
6. Firchow Peter, *Aldous Huxley – Satirist & Novelist*, University of Minnesota Press, Minneapolis, 1972.
7. May Keith M., *Aldous Huxley*, Elek London, 1972.