



## The brave new world reconsidered

Bernard Gendron

To cite this article: Bernard Gendron (1977) The brave new world reconsidered, The Philosophy Forum, 15:1-2, 49-68, DOI: [10.1080/02604027.1977.9971883](https://doi.org/10.1080/02604027.1977.9971883)

To link to this article: <https://doi.org/10.1080/02604027.1977.9971883>



Published online: 04 Jun 2010.



Submit your article to this journal [↗](#)



Article views: 13



View related articles [↗](#)

# The Brave New World reconsidered

BERNARD GENDRON

*University of Wisconsin-Milwaukee, Milwaukee, Wis.*

## I. THE BRAVE NEW WORLD

ALDOUS HUXLEY'S *Brave New World* is a fairy tale. Yet it is one of the most influential pieces of political literature of this century. It has been widely read, and those who have not read it have gotten it by osmosis.

Huxley, and many Dystopians since, have warned that our modern technological societies are slowly drifting in the direction of a "Brave New World." Modern societies, we are told, are gradually being transformed into Brave New World societies, that is, societies very similar to that described so vividly by Huxley in his *Brave New World*. This thesis has been forcefully taken up recently by Jacques Ellul, in his *Technological Society*, and Herbert Marcuse, in his *One Dimensional Man*, and previously, by Zamyatin, in *We*, and George Orwell, in 1984.

This literature rarely fails to evoke a sympathetic response in us. We are appalled by the idea of a Brave New World. We do not want to lose our freedoms and nonconformist predilections. We do not want to be turned into moronic robots; we do not want to be subject to constant manipulation and intrusion. We have been made glaringly aware, by the brain washing techniques of Russian despots, the mass propaganda tools of Fascist dictators, and even the antics of American presidents and their aides, that Brave New World stories are not wholly fairy tales.

Yet, I fear that our wholly negative response to the idea of a Brave New World is somewhat confused. We would have some difficulty

proving what our intuitions tell us is obviously true, namely, that Brave New World societies are very bad societies to live in. We would have some difficulty arguing against some of the moderately successful defenders of Brave New World societies, such as B. F. Skinner, in his best-sellers *Walden Two* and *Beyond Freedom and Dignity*. What I propose to do is to expose these confusions which we have concerning the negative features of Brave New World societies, and which have been at the root of much Dystopian literature. To do this, if only for the sake of the argument, I shall take the side of the defenders of Brave New World societies, though I think that in the long run their position turns out to be inadequate.

## II. WHAT IS WRONG WITH BRAVE NEW WORLDS?

What is wrong with Brave New World societies (BNWs)? We might answer: BNWs are among the most totalitarian of totalitarian societies, the most slavish of slave societies. Like other totalitarian societies, BNWs are governed by a small elite which settles authoritatively all the major social issues, and in the process exerts enormous control over the nonrulers. But BNW ruling elites have an edge over all previous totalitarian ruling elites: they have enormous control, not only over the behavior of their subjects, but also over their wants and needs. They not only get their subjects to behave as they want them to behave, they also get them to want what they, the ruling elites, want them to want. The control of the BNW ruling elites intrudes into the innermost psychological depths of their subjects. In traditional totalitarian societies, the rulers might get the requisite performance from their subjects, but not always their love or their loyalty. The BNW rulers not only get performance: they get loyalty universally, and even some kind of love. The BNW subjects are slaves and do not know it, or enjoy it. For example, they willingly choose the vocation (e.g., factory work) which their rulers have programmed them to have, and they willingly die at the time that their rulers have programmed them to die.

But what precisely is wrong with totalitarian societies? The obvious answer is that they are necessarily unfree: freedom we assume is a good thing, perhaps the thing of highest value. To this, defenders of

the BNW "ideal," such as B. F. Skinner, respond in one of two ways. They sometimes take the path of least resistance and argue that freedom is not such a good thing after all, or indeed that it is a bad thing. Political freedom, they say, is incompatible with the maximization of human dominion over nature, with the promotion of high production and affluence, with sound education, and with mental health and happiness. But this response does not work against those of us who are willing to subordinate dominion over nature, sound education, and even some happiness, to freedom. However, Skinner and his allies sometimes seem to take another strategy: they argue that BNW societies will be, paradoxically, more free than any other societies that will have existed before them; they are telling us, in fact that BNWs, as the most totalitarian of totalitarian societies, will be the freest of societies. And surprisingly a very strong case can be made for the freedom of BNWs. I shall now show how this case can be made.

### III. TOTALITARIANISM AND FREEDOM

Where do we, along with Dystopian writers, go wrong in our spontaneous and unhesitant belief that BNWs, as maximally totalitarian societies, are maximally unfree? According to defenders of BNWs, like Skinner, it all has to do with our lack of appreciation for the important differences among the various kinds of totalitarian societies and among the various kinds of freedom.

First, consider the variations in totalitarian societies. To exhibit the connection between unfreedom and totalitarianism, we are most apt to point to societies like Stalinist Russia, Nazi Germany, and most recently, to military societies like Brazil, Chile, and Greece. Skinner and his allies have been quick to point out that these modern dictatorships are not really BNWs or anything like them: they are really old-fashioned dictatorships, with old-fashioned ruling groups (e.g., generals, party commissars, capitalists, religious fanatics, racists) and old-fashioned techniques of control (e.g., incarceration, torture, intimidation). But BNW dictators, we are reminded, are not capitalists, fascists, Stalinists, or militarists. They are not driven by greed, aggression, or pride. They do not seek to monopolize privileges; they are not psychotic or megalomaniac.

BNWs are dictatorships of technocrats; they are dictatorships of scientists, engineers, and other “experts.” The source of technocratic power is knowledge, and not wealth or ideological fervor. Technocrats want order, efficiency, and maximal control over nature and history; they think that misery and poverty are dysfunctional relative to these ends, and so they want happiness and affluence for all. Technocrats do not assert their power through the use of crude, painful, and inefficient techniques of old, such as incarceration and torture; they resort to the more scientific and benign techniques of behavioral engineering, such as conditioning, and pharmacological, electrophysiological, and genetic manipulation.

Next, consider the variations in types of freedom. Some freedoms are nonpolitical (such as freedom from divine predestination, freedom from fate, freedom from natural laws, freedom from one’s genes and one’s environment), and others are political (such as freedom from coercion, freedom from manipulation, freedom to vote, freedom to go to the church of one’s choice). Some freedoms are negative, and others positive; any freedom *from* something is a negative freedom, such as freedom from want, freedom from fear, and freedom from sin; and any freedom *to* do, or be, something is a positive freedom, such as the freedom to own property, the freedom to be one’s master, the freedom to do as one pleases. Some freedoms are important, others unimportant. Some are achievable, and others in principle unachievable. Now, in evaluating any society in terms of the amount of freedom it allows, we are interested mainly in *political* freedoms which are *achievable* and *important*. A political freedom does not appear to be important if it does not involve, or entail, some positive freedom; that is, a political freedom *from* something does not appear important if it is not also, or does not entail, a freedom to *be* or to *do* something.

Now, as I understand Skinner and other defenders of BNWs, they seem to want to argue, against Dystopian critics, not that BNWs maximize every conceivable type of freedom; but rather that they maximize all those *political* freedoms which are *achievable* and *important*. And, as far as “pure” or “ideal” BNWs go, I think these defenders clearly win the argument against the Dystopian critics. That this is so I will establish in detail.

There are at least three kinds of freedom which are normally taken

quite seriously and which are thought to be virtually absent, or to be minimized, in any Brave New World. I label them as follows :

- 1) freedom from coercion
- 2) freedom from necessity
- 3) freedom from external control.

In the remainder of this essay, I shall explain each of these kinds of freedom. And I shall attempt to show that BNWs, were they to exist, could not be easily criticized for lacking these freedoms. This will expose some of the latent confusions of the standard Dystopian literature, which we all share with it at some time or other. For each of these freedoms, it seems to me, a plausible case can be made either (a) that the freedom in question is maximized in "pure" or "ideal" Brave New World societies, or (b) that though absent in BNWs it is also absent everywhere also, or (3) that though absent in BNWs it is no longer important or desirable.

#### **IV. FREEDOM FROM COERCION**

In order to maximize their control over the behavior of their subjects, dictatorial groups may resort either to coercive or noncoercive techniques. If the dictators do, or must, resort to physical force, to commands and threats backed by legal sanctions, to the infliction of pain and suffering, in order to get their subjects to do what they want them to do, then they are making use of coercive techniques for controlling their subjects. Coercion, of course, is called for only when the subjects are not inclined to do what their leaders want them to do, or to refrain from doing what their leaders do not want them to do. Insofar as they submit to coercive control, the subjects are prevented from doing everything that they want to do, and from refraining from everything that they do not want to do.

In noncoercive control, on the other hand, the leaders are able to get their subjects to behave as they want them to behave, without resorting to physical force, to punishment, or the threat of punishment. They get their subjects to behave as required, either by rewarding them for doing so, or by internally engineering them (by chemical,

physiological, or genetic means) to want to do so, to enjoy doing so, or to value intrinsically doing so. By the use of noncoercive techniques, the dictators in effect get the subjects to perform willingly what they are "required" to do and to refrain willingly from performing what they are "prohibited" from doing.

Now, it so happens that, when peoples have cried out for their freedom against tyrannical rule, they in effect have been crying out for freedom from coercion. Their demand has been to be left alone, to pursue the politics, the religion, and the life-style of their choice, etc.; they have sought to restrict as much as is practically feasible the ability of governments to order them around, to subject them to threats, physical abuse, and incarceration, to interfere in their affairs, to regulate their activities, to appropriate their goods, and to lay obstacles in their paths. No doubt, freedom from governmental coercion is a very important, and perhaps the most important, of political freedoms (if not the only *bona fide* political freedom).

Up to now, the most totalitarian societies (e.g., Czarist Russia, the Ottoman Empire, Nazi Germany, Stalinist Russia) have been the most coercive societies. This is because, up to now, coercion has been the primary instrument for exerting central authoritative control over citizen behavior; so there has been a positive correlation between the amount of control ruling elites have exerted over their subjects and the amount of coercion they have exerted. Consequently, the most totalitarian societies up to now have been the least free from political coercion, and the least totalitarian societies have been the most free from political coercion (e.g., postrevolutionary America).

Since BNWs are the most totalitarian of societies, one might expect that they would be the most coercive, were they to exist. Such indeed is the projection of Orwell's *1984*. But, surprisingly, most writers do not accept this estimate. Generally, the most intransigent Dystopian critics of future BNWs, such as Huxley, Marcuse, and Ellul, as well as the apologeticists, such as Skinner, agree that dictatorial coercion would be minimized in BNWs (while dictatorial control would be maximized); the nonruling members would be subject to minimal coercion by others (while subject to maximal control by others). It is generally assumed that the dictatorial elites of BNWs will resort almost exclusively to noncoercive techniques of control. In Skinner's version of the

BNW, the primary instrument of political control is positive reinforcement: the members of Walden Two acquire the requisite attitudes and behavioral repertoires by being rewarded, rather than punished, since childhood for doing so. In Huxley's version, the primary instruments of control are genetic engineering and Pavlovian conditioning. For example, the leaders for the most part do not have to resort to prohibitions backed by sanctions (e.g., the threat of jail, of death) in order to prevent the citizenry from falling in love, from getting married, or from bearing children. Rather, they have manipulated their genes so that the citizenry will be thoroughly disgusted by the very ideas of love, marriage, and parenthood; and they have supplemented this with a variety of painless "brainwashing techniques."

Now, according to this standard account, the nonruling members of BNWs are, paradoxically, almost perfectly free from coercion. For, in doing what they are controlled to do (e.g., performing a certain kind of factory work) they are doing what they want to do. The leaders of BNWs normally, in controlling their subjects, do not make the latter act against their wills. So, if the standard accounts are correct, then BNWs cannot be justifiably criticized for lacking freedom from coercion.

This startling conclusion, namely, that BNWs maximize freedom from coercion, requires some defense. Why is it that the ruling elites of BNWs, unlike the ruling elites of past dictatorial societies, will tend to resort almost exclusively to *noncoercive* rather than *coercive* means of effecting their control? The answer usually given (e.g., by Skinner) is quite simply the following. The technocratic rulers of BNWs are interested in using only the most efficient techniques of control. But punishment is simply not an efficient technique of control. The punished person will secretly desire to do (and when unsupervised will attempt to do) what it is he/she is punished for doing; and furthermore he/she will develop neuroses and anxieties which will make him/her less predictable and reliable. Thus, we can expect technocratic rulers to resort to nonpunitive techniques of control (e.g., reward, genetic engineering) in order to get their subject to do what they want them to do. That is, we can expect technocratic ruling elites of BNWs to use noncoercive rather than coercive techniques in order to exercise more



efficient control over their subjects. More traditional kinds of ruling elites, such as the feudal nobility, have been less interested in efficiency; and, at that time, and until recently, many forms of noncoercive control (e.g., the use of drugs) were not technically feasible.

That coercive control is less effective than certain forms of non-coercive control (when the latter become technically feasible) is dramatically demonstrated by the following example. Consider the case of Jones, a trained riveter, who has a fear of heights. How can those in charge get him to work on the construction of skyscrapers? They can, of course, resort to coercion. They can threaten him with incarceration, unemployment, torture, or even death, if he refuses to work on the construction of skyscrapers. But this solution is not satisfactory. As long as Jones' fear of heights is not conquered, he can barely tolerate the work which he has decided to do. (i) He is always tempted to come in late for work, to leave early, to take long lunch breaks, to spend as much time as possible near the ground, and to take "sick" leaves; and, no matter how frightful the possible punishment, Jones is always savoring the prospect of walking off the job permanently. (ii) He suffers from fears and anxieties which detract from the attention and skill he should bring to his job, which disrupt his leisure and social life, and which make him prone to be intractable, unpredictable, or uncontrollable in other life situations.

Suppose, however, that through the use of pharmacological or electrophysiological techniques (e.g., Jones is given an "anti-vertigo" drug), the bosses are able not only to eliminate his fear of heights, but also to get him actually to enjoy being in high places. Their ability to control Jones' work (and also leisure) behavior is enhanced considerably, because Jones now wants to do what they want him to do. (i) Since Jones now enjoys working in high places, he goes about his work with enthusiasm, perhaps being the first in the morning to reach the top of the edifice under construction, and the last to come down in the evening. He may work through lunch breaks and even show up at the site when slightly sick. There is no temptation on his part to pursue another occupational line, even if his pay is not fully satisfactory. (ii) He has no anxieties or fears, tied to his job, which distract him from his work, make him uncooperative, or disrupt his personal and social life.

Obviously, if the costs are not prohibitive, it is more effective to control Jones' work activity by the use of noncoercive techniques (i.e., getting Jones to want and value highly the behavior he is controlled to exhibit) than by coercive techniques (e.g., punishment or the threat thereof). Consequently, if we assume that technocratic elites are committed to maximizing the effectiveness of their control over their subjects (which seems reasonable), and we assume that, in BNWs of the future, the technologies of noncoercive control will be highly developed and moderately priced (which again seems reasonable), then we can conclude that technocratic ruling elites of BNWs will tend to maximize the noncoercive control they exercise over their subjects, and minimize the coercive control that they so exercise. This means that, in all probability, the subjects of the most advanced BNWs would be virtually completely free from coercion, and hence, completely free to do what they want. This would be no mean achievement.

## V. THE MACHINE-LIKE CHARACTER OF BNW MEMBERS

Suppose we (as many Dystopians do) conceded that in BNWs there would be full freedom from coercion, full freedom to do as one pleases. Still, we (and the Dystopian critics of BNWs) would not be satisfied. We would most probably find this freedom possessed by BNW members to be a very superficial freedom; we would say that the BNW members have completely lost touch with the truly basic and ennobling kinds of freedom. Our line might be something like the following. "No doubt, people in the BNW are free to do what they want most or value most highly; but they are not free in wanting what they want, or in valuing what they value. They are not free to reject or transform their basic wants and basic values. For their basic wants and basic values have been programmed into them by their rulers. The nonruling members may have control over what they do; but they do not have control over what they want or what they value. Only their programmers, the technocrats, are in a position to control what they, the programmed nonrulers, will want and value. The nonruling members are like automata; and like automata, they have no autonomy. And so, in the 'deep' sense of the term, they have no real freedom."

So goes the objection. Though BNW members are “superficially” free (i.e., free from coercion), they are “deeply” unfree in the same sense in which automata or machines are unfree. But, in what sense are machines or automata unfree?

Traditionally, machines (or automata) have been thought to be unfree in at least two ways. (1) First, machines are *unfree from necessity*. Machines are governed by deterministic laws. Everything that a machine does, is the inevitable and necessary consequence of its previous internal states (e.g., the connections between its wires) and its previous inputs (e.g., the pressing of various buttons). Indeed, everything that a machine does, is the inevitable and necessary consequence of its original internal states (including its original program) in conjunction with the temporal sequence of inputs which have occurred since then. Given its original constitution and subsequent inputs, it is impossible for the machine to do otherwise than it will do subsequently. Insofar as a machine is necessarily what it is, given its previous inputs and internal states, then a machine can be said to be *unfree from necessity*. (2) As artificial systems, machines, whatever be their native “intelligence,” are essentially at the service of other intelligent beings (presumably humans); they are designed, created, overseen, controlled, and manipulated by other intelligent beings. They perform the tasks they do perform only because someone has decided that they should do so, only because their doing so fits in with someone else’s plans, and contributes to the meeting of his objectives. It is an essential mark of machines that their functioning is virtually under the complete control of other intelligent beings. In this sense, machines are *unfree from external control* (by other intelligent beings).

No doubt, the nonruling members of ideal BNWs are completely unfree from necessity and from external control. For what they are, and how they behave, is completely determined by their genes and environment; hence they are unfree from necessity. Furthermore, they are under the complete control of their rulers, and hence, are completely unfree from external control by others. Having to concede this, the defenders of BNWs can only respond that these freedoms are either unachievable anywhere else or no longer politically important. This response, I think, can be maintained quite plausibly, as I shall show in the following sections.

## VI. FREEDOM FROM NECESSITY

It could be argued that no humans are, or can be, free from necessity, and hence, that BNWs cannot be justifiably blamed for lacking it.

First, it is scientifically quite respectable to assume that the psychic states of human beings, as well as their behavior, is completely determined by the interaction of their genes and environment. Humans are organisms, and organisms are macro-physical objects. Now, the states of inanimate macro-physical objects seem to be completely determined by previous states of these objects and of the universe. This at least is what science tells us. And there is strong evidence that non-human organisms are also governed by deterministic laws, that is, by laws specifying that states of a certain sort are the inevitable and necessary outcome of previous states of other sorts. And there is no strong evidence for concluding that humans, alone among all organismic macro-physical entities, are not wholly governed by deterministic laws.

Be that what it may, at least this much can be said: if we allow that BNWs are possible (as Dystopians do), then we must conclude that human beings generally are unfree from necessity. The possibility of BNWs presupposes that human mental states and behavior are completely determined by human genes and previous states of the environment. For the rulers of BNWs exercise virtually complete control over the beliefs, wants, and acts, of the nonruling members. This they can achieve only indirectly: that is, BNW rulers can exercise complete control over the beliefs, wants, and acts of the nonruling members by exercising complete control over the genes and environments of the nonruling members. But this complete control over gene-environment interactions will not translate into complete control over beliefs, wants, and acts, unless it is already the case, even before the rulers have intervened, that the gene-environment interactions of human beings completely determine their beliefs, wants, and acts. The deterministic relation between gene-environment interactions and subsequent mental states and acts is not brought about as a consequence of the exercise of power by the BNW rulers; rather, it is presupposed by that exercise of power. The BNW rulers do not bring it about that genes and environ-

ments determine the contents of minds and behavior; rather, they are able to manipulate genes and environments successfully to achieve complete control over the contents of minds and behavior, only because humans are already the sorts of beings whose mental and behavioral states follow necessarily and inevitably from the interaction of their genes and environments.

So, either “pure” BNWs (i.e., BNWs where the ruling elites have virtually complete control over the thoughts and behavior of their subjects) are possible or not. But, if they are possible, as we and the Dystopian critics seem to assume, this is in part because humans are not free from necessity. BNW leaders, no matter what their power, can never bring it about that humans are unfree from necessity: their completely successful exercise of power rather presupposes that we are unfree from necessity. If we are unfree from necessity, then this burden (if burden it be) is imposed on us by nature, and not by other humans.

Consequently, it appears, if freedom from necessity is not achievable in a BNW, then it is not achievable in any other society either. Freedom from necessity is not a freedom which we can impose or take away by human contrivance; in this sense, it is not a *political* freedom, and is not relevant to the discussion of alternative political societies.

## VII. FREEDOM FROM EXTERNAL CONTROL

Brave New World societies offer virtually no freedom from external control; in an “ideal” BNW the rulers have virtually complete control over the nonruling population. And certainly there is less freedom from external control in BNWs than in any of the societies, even the most dictatorial, which have existed in the past. Freedom from external control (by others) is absent in BNWs but achievable (within limits) in societies other than BNWs.

Thus, it appears, Dystopians can at least justifiably criticize BNWs for lacking any freedom from external control. But the issue has not been won yet. The defenders of BNWs have a response which is not altogether easy to overcome. They say that freedom from external control is no longer a desirable or important political freedom. (Cf. Skinner’s *Beyond Freedom and Dignity*.) What is the basis for this?

No doubt, the defenders would admit, freedom from external control was indispensable and important in traditional, technologically backward societies, as a means for enhancing freedom from coercion. In these societies, rulers exercised control through the use of force, punishment, and the threat of punishment. In these societies, there has been a direct correlation between the amount of external control exercised by rulers over the subject population and the amount of coercion they have imposed; thus, the less freedom from external control the traditional subjects have had, the less freedom from coercion they have had. In traditional societies, freedom from coercion has presupposed freedom from external control. Since freedom from coercion is, and has always been, an important and desirable freedom, then, at least in traditional, technologically backward societies, freedom from external control, as an indispensable means for the attainment of freedom from coercion, has also been an important and desirable freedom.

But such is no longer the case in technologically advanced societies (of the present or future), according to the defenders of BNWs. Here rulers can most effectively control their subjects by using noncoercive means, that is, by subtly getting their subjects to want to do, and to enjoy doing, what the rulers require them to do; the use of threats and punishment can be virtually eliminated as an instrument of control in technological advanced societies. So, with the advance of modern technology, it is possible to institute BNWs in which the complete absence of any freedom from external control is accompanied by the maximization of freedom from coercion. In advanced technological societies, freedom from external control is not an indispensable means for achieving freedom from coercion. That is, freedom from external control is no longer important and desirable as a means for eliminating coercion.

We must remember also that, in an "ideal" BNW, the nonruling members, though fully controlled, are (virtually) completely content. This is not because the BNW technocratic rulers are lovers of humanity; rather, it is because it is easier to control content people than discontent people. But that the nonruling members are generally content is due to the way they are programmed. General contentment is possible only when the wants and needs of the population have been harmonized. If everyone wants the same job, the same status, or the

same scarce good (e.g., one's own airplane); if everyone is competitive, aggressive, or spiteful; if all this is the case, then of course not everyone will be content. The BNW rulers thus program into their subjects only wants which are in harmony with each other (e.g., not everyone wants to be a carpenter or wants an airplane), and refrain from programming in "anti-social" wants, such as the desire to compete or to fight. So, the fact that there is little or no misery in BNWs, that there is some form of general happiness, is due to the fact that the wants and needs of BNW members are almost completely and systematically controlled by the rulers. Hence, the happiness and contentment of the nonruling members is a consequence of their lack of any freedom from external control.

It would appear, therefore, contrary to what Dystopians would say, that in a world of advanced technology, the presence of freedom from external control, is no longer an indispensable condition for the preservation of obviously important freedoms (e.g., freedom from coercion); and the elimination of freedom from external control has certain good results, e.g., the harmonization of needs and general contentment.

But if all this is true, if members of BNWs, though completely controlled by others, are generally uncoerced and content, then why is it bad for them to lack the freedom from external control? What gain would there be for them to have freedom from external control? I said before that a freedom from something is not worth anything, if it is not also, or does not entail a freedom to be, or do, something or other. (Freedom from coercion, for example, entails the freedom to do as one pleases.) So the question comes up: what is it that the nonruling members of ideal BNWs would be free to do if they were given freedom from external control, which they are not free to do without it? The obvious answer might be: what the nonruling members are not free to do, whatever their happiness may consist in, is to exert internal control over their own lives; being controlled by others, they cannot control themselves. Is this necessarily true?

To say that I have "internal" control over my behavior is to say, apparently, that my behavior springs from my own choices and wants, that these choices and wants are governed by principles which I have internalized, and that I am willing and able periodically to criticize and even change some or all of my principles of action. Now, it seems

to me possible to build a BNW in which the populace generally does what it has chosen to do, generally chooses on the basis of principles and reasons, and periodically critically assesses its principles and changes them. For, if a BNW is possible, there is no freedom from necessity for anyone; and if there is no freedom from necessity for anyone, then all our wants and choices, our deliberations and reasoning, as well as our principles, are determined ultimately by the interaction of our genes and environments. Now, either this means that we really do not exercise internal control over our behavior when we choose, deliberate, and assess our principles, or that our "internal control" or our "self-control" is itself determined by our genes and environments. If the former answer is correct, then no peoples, whether in or out of BNWs, can exercise internal control over their behavior and their lives; if the latter is correct, then members of BNWs can have just as much self-control over their behavior as members of other, allegedly "free," societies.

If the way we internally control our behavior, through choices and deliberations and applied principles, is determined by our genes and our environment, then paradoxically, the way in which we internally control our behavior can be controlled externally by others. For anything which we do, which is determined by our genes and environment, can be controlled by others. Take, for example, my choice to become a carpenter, my reasonings about becoming a carpenter, and my vocational principles, such as, the principle that I ought to pick the kind of job which is most conducive to my physical health. Now, if my choice to become a carpenter, my reasonings about this choice, and my principle to pick the physically healthiest possible job, are determined by the presence of a particular arrangement of genes and environments, then this choice, these reasonings, and the internalization of that principle, might have been induced in me by any behavioral engineer who properly manipulated my genes and environments. And this choice and these principles could be induced in anyone else who was given by some behavioral engineer, the proper arrangement of genes and environments. Furthermore, by properly arranging my genes and environments, the behavioral engineer could get me to question my vocational principle, or even to reject it, because it fails to satisfy some other principle, and so on. Thus, as a consequence of genetic-envi-



mental engineering, I might in the appropriate circumstances ask myself whether I should pick an occupation that was most physically healthy if it prevented me thereby from properly supporting my family. So, it appears, a BNW-type ruler might engineer me to exercise "internal control" over my behavior: I would choose what I do (my behavior would not simply appear compulsively); I would carefully weigh my decision (and thus not act rashly or irrationally); and I would examine my principles of action (so as not to behave dogmatically). But my behavior ultimately would be no less determined, or controlled by others, than that of a compulsive, rash, and dogmatic person, who presumably exhibits no internal control over his behavior.

*In conclusion.* Any sort of behavior which is completely determined by the agent's genes and environments is completely controllable by some person other than the agent. But BNWs are not possible unless it is generally the case that human behavior is completely determined in this way. Thus, the behavior of the "self-controlled" person is just as controllable and manipulable as is the behavior of a person lacking self-control. Depending on how he/she brings together the genes and environments of nonruling members, the BNW ruler can create either self-controlled or non-self-controlled persons (e.g., kleptomaniacs). And supposing that the BNW ruler has decided to create self-controlled persons, he/she can further choose which kind of self-controlled person to bring into existence, by selecting from the various combinations of genes and environments which induce some form of self-controlled behavior. So, the BNW ruler, by appropriately manipulating genes and environments, can create exactly the kind of self-controlled person that he/she wants, to perform exactly the kinds of behavior which he/she wants.

Consequently, there appear to be no good reasons, in the abstract, why ruling elites of BNWs, in order to maximize their power, should choose for their subjects the sorts of gene-environment complexes which induce compulsive actions, compulsive choices, or the uncritical acceptance of principles, rather than the sorts of gene-environment complexes which induce choice-governed actions, reason-governed choices, and the critical acceptance of principles; for they can exercise just as much control over their subjects' choice-governed actions, reason-governed choices, and critical acceptance of principles, as they

can over their subjects' compulsive actions, compulsive choices, and uncritical acceptance of principles.

It is not difficult to conceive of ways in which nonruling members of BNWs, like certain kinds of automata, might be programmed to exercise internal control over their acts. The rulers of BNWs control the behavior of their subjects by controlling their choices. But they need not, and indeed would not, control these choices by imposing them out of the blue on their subjects. Such a procedure would be unbelievably unwieldy. Rather, through genetic engineering and the manipulation of the internal and external environments, they would program into their subjects the general rules governing the making of choices in various circumstances. Or, better still, they might program in only the general higher level rules which guide the selection of first-level rules which in turn guide the selection of choices; in the latter case, they might program in directly only the ultimate objectives the subject is to pursue or the rules he/she is to prize most highly, leaving it up to him/her to determine through experience, i.e., through the "contingencies or reinforcement," which subordinate rules or values will most effectively contribute to the implementation of the primary rules or values. Thus, the nonruling members of a Brave New World need not be like an adding machine, whose every move is triggered by an outside command, nor necessarily like a computer, whose every move is determined by a set of pre-given general instructions, but perhaps more like a game-playing machine or a pattern-recognition machine, whose program for strategies and rules keeps changing in the light of pre-programmed ultimate objectives, and continued negative and positive reinforcement. Now, it is true that the programmer does not determine explicitly every rule that the game-playing machine will follow; but it is misleading to say that he/she has thereby less control over the machine than does a computer programmer over the computer. For he/she does control the contingencies of reinforcement; and, as long as he/she gets the machine to achieve the objectives he/she wants it to achieve, then he/she has full control over it. Indeed, for complex tasks, it is much more effective for the programmer (or the dictator) to deal with automata (or subjects) which are plastic, adaptive, and self-regulative, than with those which are not; that is, it is much more effective for the programmer (or ruler) to deal with auto-

mata (or subjects) which, while fulfilling his/her objectives, require of him/her a minimum of attention and intervention.

Now, a self-controlled person may be controllable in much the same way that a game-playing machine—or any other sort of plastic, adaptive, and self-regulative machine—is controllable; and, in the performance of complex tasks, self-controlled persons are superior to persons having no self-control for the same sort of reasons that game-playing machines are superior to mere calculational machines. Thus, there is little doubt that any well-run BNW would include a large number of self-controlled nonruling subjects.

The compatibility between being externally controlled and exercising internal control is further illustrated by the fact that, at least in Huxley's BNW, the procedure of external control are mainly applied to factors on which, or contexts in which, the subject could not conceivably have had any internal control. For, external control is effected mainly through genetic engineering and the classical conditioning of young children. But neither of these procedures rob their subjects of any potential internal control. No person could have determined his/her genetic make-up at birth or his/her environment in the early years following birth; and no child could have chosen his/her original character traits. The only difference between a BNW and a classical nontotalitarian society is that in the former case, the genetic makeup and early environment of an individual are determined by human planning, and in the latter case they are a consequence of natural accidents and the vagaries of human interaction.

It may be objected that the practice of the so-called "internally controlled" members of BNWs, to examine "critically" their basic principles, is a meaningless ritual; for these members are not "free" to reject or to rebel against, the basic principles which have been inculcated in them. Whereas at least some members of traditional nontotalitarian societies would be free to reject, or to rebel against, the basic values which have been inculcated in them. But this is a confusion. In one sense, members of BNWs are free to change their minds and to rebel; that is, they can if they want, though they do not want to. (In this sense, they are free from coercion.) But, in the "deeper" sense in which they are unfree to change their minds and rebel, neither are the rebels of nontotalitarian societies free not to change their minds

and not to rebel; for no one is free from necessity, neither the conformist who has been determined by his genes and his environments to be a conformist, nor the rebel who has been similarly determined to be a rebel.

It seems to me that the defenders of BNWs might thus conclude as follows. There is no correlation between freedom from external control, on the one hand, and the freedom to exercise internal control, on the other. By being deprived of freedom from external control, the non-ruling members of BNWs would not thereby be deprived of internal control or self-control. And there does not seem to be anything else which the members of "ideal" BNWs would be rendered unfree to do, because of their lack of freedom from external control. From the point of view of the nonruling members of BNWs, the acquisition of freedom from external control would not involve the acquisition of any positive freedom, that is, any freedom to do or be something which they did not have before. Freedom from external control, for BNW members, would appear as a purely negative freedom; for them, it would be an unimportant, a useless, and even a damaging freedom.

Generally, the defenders of BNWs seem to argue, BNWs cannot justifiably be criticized for lacking any important and achievable political freedom. Ideal BNWs would maximize freedom from coercion. They would totally lack freedom from necessity and freedom from external control. But, if BNWs are possible, then freedom from necessity is unachievable anywhere; and the freedom from external control is no longer important or useful in advanced technological societies.

## VIII. IDEAL AND NON-IDEAL BNWs

In any abstract argument, the defenders of BNWs (such as Skinner) seem to beat out the Dystopian critics. Does that mean that our negative feelings about the dictatorial consequences of modern technology, and concerning the prospect for the existence of Brave New Worlds, are wholly confused and illusory? Could we have been so hopelessly misled? Our intuitions and feelings about Brave New Worlds are probably confused, but they are far from illusory. There is something

very offensive about defending the expected technological dictatorships of the future. It is not easy to show precisely why it is offensive. Thus, the success of Skinner and his like.

Our negative feelings about future technological dictatorships, though in all probability basically right, are somewhat misdirected. We focus on ideal BNWs, that is, BNWs in which all decisions are made by "pure" technicians, in which only noncoercive techniques of behavior control are used, in which all scarcity has been eliminated, in which happiness prevails, and in which full moronic work is carried out exclusively by machines. Ideal or pure BNWs are utopias of sorts: and it is difficult to show what is bad about them. But they are also highly improbable; indeed, we might say with a good deal of confidence that nothing like an ideal or pure BNW will ever exist. What we have a right to fear is not these imaginary utopian BNWs, but those more probable "half-baked" or "mixed" or "intermediate" BNWs in which technocrats share power with capitalists or generals or party bureaucrats, in which crude techniques of coercive control still must be resorted to (cf. Orwell's *1984*), in which scarcity dominates, and in which many humans must perform alienating and stupid jobs. There is considerable probability that new technological techniques (e.g., new armaments, new information—gathering devices, new discoveries on the control of human fear) will favor the rise of dictatorships of this "mixed" sort. These of course should be feared: we can well conceive the horrors which they may perpetrate. The defenders of BNWs win the argument because they assume the possibility of a completely utopian dictatorial system. A utopian dictatorship would be quite fine, and certainly better than many nondictatorial but nonutopian societies. But, we can be sure, no such thing will ever take place. We should be appalled by all dictatorships, present or future, not because we would find even a utopian dictatorship (e.g., an ideal or pure BNW) to be bad, but because we have good reason to believe that no utopian dictatorship, or ideal BNW, will ever exist, and we know that nonutopian dictatorships are bad. In expressing our fears about the political impact of modern technology, we have let ourselves be misdirected both by the Dystopian critics, and the defenders, of future technocratic societies, into focusing these fears on dictatorial societies which will never exist, and which we ought not to fear if they were to exist.