

T-2 and U-14; A Comprehensive Comparison

Document T-2 is a 23-page, typed, double spaced, essay written in 1971 by Ted Kaczynski. The copy furnished to the UNABOM Task Force (UTF) did not have a cover page and there were several handwritten notes throughout the body of it. (These notes were included in the attached). Also, there are numerous instances in which certain words or phrases are unintelligible. These are noted as "UI."

Document U-14 is a 56-page, typed, single spaced essay, received in 1995 by the UTF. Its cover page reads "Industrial Society and Its Future" by FC. It is also known as "The Manuscript" and "The Manifesto."

The content, context, and writing style of both documents are very similar. At T-2's 6,374 words, and U-14's 34,649 words, it could appear that the latter is a greatly expanded, more detailed, version of the former. Many of the problems and issues articulated in the two documents are virtually identical, only they are enhanced upon in U-14 and the proposed solutions differ.

In U-14, the author wrote 232 paragraphs which were arranged into 27 titled chapters. A review of T-2 would suggest that it consists primarily of 10 of the 27 chapters of U-14, and that those 10 chapters represent the core which was eventually expanded, some 24 years later, to the 27 chapters in U-14.

The 27 chapters contained in U-14 are listed as follows: The highlighted 10 chapters, although not individually named in T-2, are very similar in content and context to those in U-14. (The numbers in parenthesis indicate the paragraph numbers as reflected in U-14.)

INTRODUCTION (1-5)

PSYCHOLOGY OF MODERN LEFTISM

FEELINGS OF INFERIORITY

OVERSOCIALIZATION

POWER PROCESS

SURROGATE ACTIVITIES (38-41)

AUTONOMY

SOURCE OF SOCIAL PROBLEMS

DISRUPTION OF POWER PROCESS IN MODERN SOCIETY (59-76)

HOW SOME PEOPLE ADJUST

THE MOTIVES OF SCIENTISTS

THE NATURE OF FREEDOM

SOME PRINCIPLES OF HISTORY

INDUSTRIAL-TECHNOLOGY SOCIETY CANNOT BE REFORMED RESTRICTION OF FREEDOM IS UNAVOIDABLE IN INDUSTRIAL SOCIETY (114-120)

THE "BAD" PARTS OF TECHNOLOGY CANNOT BE SEPARATED FROM "GOOD" PARTS (121-124)

TECHNOLOGY IS THE MORE POWERFUL SOCIAL FORCE THAN THE ASPIRATION FOR FREEDOM (125-135)

SIMPLER SOCIAL PROBLEMS HAVE PROVED INTRACTABLE REVOLUTION

IS EASIER THAN REFORM
CONTROL OF HUMAN BEHAVIOR (143-160)
HUMAN RACE AT CROSSROADS
HUMAN SUFFERING
THE FUTURE (171-179)
STRATEGY
TWO KINDS OF TECHNOLOGY
THE DANGER OF LEFTISM (213-230)
FINAL NOTE (231-232)

In many of the paragraphs of both documents, the sequence of ideas and examples are consistent. In fact, of the 47 paragraphs in T-2, 35 of them can be closely correlated with paragraphs in U-14. Of the remaining 12 uncorrelated T-2 paragraphs, 3 are a summary of Perry London's book, and 5 are Kaczynski's 1971 solutions to societal problems. In U-14, the solutions to the same societal problems changed, thus, it differs from T-2's solutions.

The following is a paragraph by paragraph comparison between documents T-2 and U-14. T-2 is printed in its entirety across the top half of the next 62 pages. The appropriately matching U-14 sentence, statement, and /or phrase, is listed, with paragraph number, on the bottom half of each page. (Words in **bold** are for emphasis as it relates to this report. They were not in bold in the original versions.)

T-2 DOCUMENT (1971)

In these pages it is argued that continued scientific and technical progress will **inevitably** result in the **extinction of individual liberty**. I use the word "inevitably" in the following sense: One might—possibly—imagine certain conditions of society in which freedom could coexist with (UI) technology, but these conditions do not actually exist, and we know of no way to bring them about, so that, in practice, scientific progress will result in the extinction of individual liberty. Toward the end of this essay we propose what appears to be the only thing that bears any resemblance to a practical remedy for this situation.

U-14

2. The industrial-technological system may survive or it may break down...if the system survives, the consequences will be **inevitable**: there is no way of reforming or modifying the system so as to prevent it from **depriving people** of... dignity and **autonomy**.

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I hope that the reader will bear with me when I recite arguments and facts with which he may already be familiar. I make no claim to originality. I simply think that the case for the thesis stated above is convincing, and I am attempting to set forth the arguments, **new** and old, in as clear a manner as possible, in the hope that the reader will be persuaded to support the solution here suggested—which certainly is a very obvious solution, but rather hard for many people to swallow.

U-14

5. In this article we give attention to only some of the negative developments that have grown out of the industrial-technological system. Other such developments we mention only briefly or ignore altogether. This does not mean that we regard these other developments as unimportant. For practical reasons we have to confine our discussion to areas that have received insufficient public attention or in which we have something **new** to say...

T-2

The power of society to control the individual person has recently been **expanding very rapidly**, and is expected to expand even more rapidly in the near future. Let us list a few of the more ominous developments as a reminder.

(1) **Propaganda and image-making techniques.** In this context we must not neglect the role of movies, television, and literature, which commonly are regarded either as art or as **entertainment**, but which often consciously adopt certain points of view and thus serve **as propaganda**. Even when they do not consciously adopt an explicit point of view they still serve to indoctrinate the

U-14

130. Technology **advances with great rapidity** and threatens freedom at many different points at the same time (crowding, rules and regulations, increasing dependence of individuals on large organizations, **propaganda and other psychological techniques**, genetic engineering, invasion of privacy through surveillance devices and computers, etc.)...

73. ...Propaganda is not limited to "commercials" and advertisements, and sometimes it is not even consciously intended as propaganda by the people who make it. For instance, the content of **entertainment** programming is a powerful form of **propaganda**...

147. ...The **entertainment** industry serves as an important psychological tool of the system...

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viewer or reader with certain values. We venerate the great writers of the past, but one who considers the matter objectively must admit that modern artistic techniques have developed to the point where the more skillfully constructed movies, novels, etc. of today are (handwritten: to the average viewer or reader), far more psychologically potent than, say Shakespeare ever was. The best of them are capable of gripping and involving the reader very powerfully and thus are presumably quite effective in influencing his values. Also note the increasing extent to which the average person today is "living in the movies" as the saying

T-2

is. People spend a large and increasing amount of time submitting to canned entertainment rather than participating in spontaneous activities. As **overcrowding and rules and regulations** entail opportunities for spontaneous activity, and as the developing techniques of entertainment make the canned product ever more attractive, we can assume that people will live more and more in the world of **mass entertainment**.

U-14

130. Technology advances with great rapidity and threatens freedom at many different points at the same time (**crowding, rules and regulations**, increasing dependence of individuals on large organizations, propaganda and other psychological techniques, genetic engineering, invasion of privacy through surveillance devices and computers, etc.)...

156. ...Yet **mass entertainment** is a means of escape and stressreduction on which most of us have become dependent...

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(2) A growing emphasis among educators on "guiding" the **child's emotional development**, coupled with an increasingly **scientific attitude** toward **education**. Of course, educators have always in some degree attempted to mold the attitudes of their pupils, but formerly they achieved only a limited degree of success, simply because their methods were unscientific. Educational psychology is changing this.

(3) Operant conditioning, after the manner of B. F. Skinner and friends. (Of course, this cannot be entirely separated from item (2).)

U-14

148. ...It (education) is becoming a **scientific technique** for controlling the **child's development...**

T-2

(4) Direct physical control of the **emotions** via **electrodes** and "chemitrodes" **inserted in the**

brain. (See Jose N. R. Delgado's book "Physical Control of the Mind".)

(5) Biofeedback training, after the manner of Joseph Kamiya and others.

(6) Predicted "**memory pills**" or other **drugs** designed to improve memory or increase intelligence.

(The reader possibly assumes that items (5) and (6) present no danger to freedom because

their use is supposed to be voluntary, but I will argue that point later. See page 15.)

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157. ...As experimenters have demonstrated, **feelings** such as hunger, pleasure, anger and fear can be turned on and off **by electrical stimulation** of appropriate parts of the **brain. Memories** can be destroyed by damaging parts of the brain or they can be brought to the surface by electrical stimulation. Hallucinations can be induced or moods changed by **drugs...**

158. It presumably would be impractical for all people to have **electrodes inserted in their heads...**

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(7) Predicted **genetic engineering**, eugenics, related techniques.

(8) Marvin Minsky of MIT (one of the foremost computer experts in the country) and other **computer scientists** predict that within fifteen years or possibly much less there will be **superhuman computers with intellectual capacities far beyond anything of which humans are capable.** It is to be emphasized that these computers will not merely perform so-called "mechanical" operations; they will be capable of **creative thought.** Many people are incredulous at the idea of a creative computer, but let it be remembered that (unless one resorts to supernatural

U-14

122. ...The only solution will be some sort of eugenics program or extensive **genetic engineering** of human beings...

172. First let us postulate that the **computer scientists** succeed, in developing **intelligent machines that can do all things better than human beings can do them...**The machines might be permitted to **make all of their own decisions** without human oversight...

T-2

explanations of human thought) the human brain itself is an electro-chemical computer, operating according to the laws of physics and chemistry. Furthermore, the men who have predicted these computers are not crackpots but first-class scientists.

It is difficult to say in advance just how much power these computers will put into the hands of what is vulgarly termed the establishment, but this power will probably be very great. Bear in mind that these **computers** will be wholly **under the control** of the scientific, bureaucratic, and business **elite**. The average person will have no access to them. Unlike the human brain,

U-14

174. ...In that case the **average man** may have control over certain private machines of his own, such as his car or his personal computer, but **control over large systems of machines** will be in the hands of a tiny **elite...**

190. ...The line of conflict should be drawn between the mass of the people and the **power-holding elite** of industrial society (politicians, **scientists**, upper-level **business** executives, **government officials**, etc.)...

T-2

computers are more or less unrestricted as to size (and, more important, there is no restriction on the number of computers that can be linked together over long distances to form a single brain), so that there is no restriction on their memories or on the amount of information they can assimilate and correlate. Computers are not subject to fatigue, daydreaming, or emotional problems. They work at fantastic speed. Given that a computer can duplicate the functions of the human brain, it seems clear in view of the advantages listed above that no human brain could possibly compete with such a computer in any field of endeavor.

T-2

(9) Various electronic devices for **surveillance**. These are being used. For example, according to newspaper reports, the police of New York City have recently instituted a system of 24-hour television surveillance over certain problem areas of the city.

These are some of the more strikingly, ominous facets of scientific progress, but it is perhaps more important to look at the effect of **technology as a whole on our society**.

U-14

147. To start with, there are the techniques of **surveillance**.

Hidden videocameras are now used in most stores and in many other places...

129. ...Not only do people become dependent as individuals on a new item of **technology**, but, even more, the **system as a whole** becomes dependent on it. . .

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Technological progress is the basic cause of the continual increase in the number of **rules and regulations**. This is because many of our technological devices are more powerful and therefore more potentially destructive than the more primitive devices they replace (e.g. compare autos and horses) and also because the increasing complexity of the system makes necessary a more delicate coordination of its parts. Moreover, many devices of fundamental importance (e.g. **electronic computers**, television broadcasting equipment, jet planes) cannot be owned by the **average person** because of their size and costliness. These

U-14

71. ...modern man is strapped down by a network of **rules and regulations**...

174. ...In that case the **average man** may have control over certain

private machines of his own, such as his car or his **personal computer**, but control over large systems of machines will be in the hands of a tiny elite...

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devices are controlled by **large organizations** such as corporations and governments and are used to further the purposes of the establishment. A larger and larger proportion of the individual's environment—not only his physical environment, but such factors as the kind of work he does, the nature of his entertainment, (UI) comes to be created and controlled by **large organizations** rather than by the individual himself. And **this is a necessary consequence of technological progress**, because to allow technology to be exploited in an unregulated, unorganized way would result in disaster.

U-14

163. ...Human freedom mostly will have vanished, because individuals and small groups will be impotent vis-a-vis **large organizations** armed with supertechnology and an arsenal of advanced psychological and biological tools for manipulating human beings, besides instruments of surveillance and physical coercion...

114. ...the regulation of our lives by **large organizations** is **necessary for the functioning of industrial-technological society.**

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Note that the problem here is not simply to make sure that technology is used only for good purposes. In fact, we can be reasonably certain that the powers which **technology** is putting in to the hands of the establishment will be used to promote **good** and eliminate **evil**. These powers will be so great that within a few decades virtually all evil will have been eliminated. But, of course, "good" and "evil" here mean good and evil as interpreted by the social mainstream. In other words, technology will enable the social mainstream to impose its **values universally**. This will not come about through the machinations

U-14

121. ...You can't get rid of the "**bad**" parts of **technology** and retain only the **good** parts...

124. ...so that in effect they would be imposing their own **values** on the genetic constitution of the **population at large**...

T-2

of power-hungry scoundrels, but through the efforts of socially responsible people who sincerely want to do good and who sincerely believe in freedom(UI) concept of freedom will be shaped by their own values, which will not necessarily be the same as your values or my values.

The most important aspect of this process will perhaps be the education of children, so let us use education as an example to illustrate the way the process works. Children will be taught— by methods which will become increasingly effective as **educational psychology** develops—to be creative, inquiring,

U-14

148. ...Sylvan Learning Centers, for example, have had great success in motivating children to study, and psychological techniques are also used with more or less success in many conventional schools...

161. ...while the techniques of **educational psychology** doubtless work quite well...

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appreciative of the arts and sciences, interested in their studies—perhaps they will even be taught nonconformity. But of course this will not be merely random nonconformity but "creative" nonconformity. Creative nonconformity simply means nonconformity that is directed toward socially desirable ends. For example, children may be taught (in the name of freedom) to liberate themselves from the irrational prejudices of their elders, "**irrational prejudices**" being those values which are not conducive to the kind of society that most educators choose to regard as healthy. Children will be educated to be **racially** unbiased, to abhor violence, to fit into society without excessive conflict. By a series of small steps—each of which

U-14

153. ...Propaganda (education) for example is used for many good purposes, such as discouraging...**race hatred**...

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will be regarded not as a step toward behavioral engineering but as an improvement in educational technique—this system will become so effective that hardly any child will turn out to be other than what the educators desire. The educational system will then have become a form of psychological compulsion. The means employed in this "education" will be expanded to include methods which we currently would consider disgusting, but since these methods will be introduced in a series of small steps, most

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people will not object—especially since children trained to take a "scientific" or "rational" attitude toward education will be growing up to replace their elders as they die off.

For instance, **chemical** and **electrical manipulation of the brain** will at first be used only on children considered to be insane, or at least severely disturbed. As

people become accustomed to such practices, they will come to be used on children who are only moderately disturbed. Now, whatever is on the furthest fringes of the abnormal generally comes to be regarded with abhorrence. As the more severe forms of

U-14

149. Presumably, research will continue to increase the effectiveness of psychological techniques for controlling human behavior...Biological methods probably will have to be used. We have already mentioned the use of **drugs** in this connection. **Neurology** may provide other avenues for modifying the human mind...

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disturbances are eliminated, the less severe forms will come to constitute the outer fringe; they will thus be regarded as abhorrent and hence as fair game for chemical and electrical manipulation. Eventually, all forms of disturbance will be eliminated—and anything that brings an individual into conflict with his society will make him unhappy and therefore will be a disturbance. Note that this whole process does not presuppose any antilibertarian philosophy on the part of educators or psychologists, but only a desire to do their jobs more effectively.

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Consider: Today, how can one argue against **sex education**? Sex education is designed not simply to present children with the bold facts of sex, it is designed to guide children to a healthy attitude toward sex. And who can argue against that? Think of all the misery suffered as a result of **Victorian repressions**, sexual perversions, frigidity, unwanted pregnancies, and venereal disease. If much of this can be eliminated by instilling "healthy" (as the social mainstream interprets that word) sexual attitudes in children, who can deny it to them? But it will be equally impossible to argue against any of the other steps that will eventually lead to the complete engineering of the human personality. Each step will be equally humanitarian in its goals.

U-14

153. ...Sex education is obviously useful...

Note 2. During the **Victorian** period many oversocialized people suffered from serious psychological problems as a result of **repressing** or trying to **repress** their sexual feelings...

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There is no distinct line between "guidance" or "influence" and manipulation. When a technique of influence becomes so effective that it achieves its desired effect in nearly every case, then it is no longer influence but compulsion. Thus influence evolves into compulsion as science improves techniques.

Research has shown that exposure to television violence makes the viewer more prone to violence himself. The very existence of this knowledge makes it a foregone conclusion that restrictions will eventually be placed on televised violence,

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either by the government or by the TV industry itself, in order to make children less prone to develop violent personalities. This is an element of manipulation. It may be that you feel an end to television violence is desirable and that the degree of manipulation involved is insignificant. (Handwritten: Indeed, it is impossible to argue against an end to television violence.) But science will reveal, one at a time, a hundred other factors in **entertainment** that have a "desirable" or "undesirable" effect on the personality. In the case of each one of these factors, knowledge will make manipulation inevitable. When the whole

U-14

156. ...Yet **mass entertainment** is a means of escape and stressreduction on which most of us have become dependent...

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array of factors has become known, we will have drifted into large-scale manipulation. In this way, research leads automatically to calculated indoctrination.

By way of a further **example, let us consider genetic engineering**. This will not come into use as a result of a conscious decision by the majority of people to introduce genetic engineering. It will begin with certain "progressive" **parents** who will voluntarily avail themselves of genetic engineering opportunities in order to eliminate the risk of certain gross physical defects in their offspring. Later, this engineering

U-14

128. ... **Take genetic engineering, for example...**

154. Suppose a biological trait is discovered that increases the likelihood that a child will grow up to be a criminal, and suppose some sort of gene therapy can remove this trait. Of course most **parents** whose children possess the trait will have them undergo the therapy...

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will be extended to include elimination of mental defects and treatment which will predispose the child to somewhat higher intelligence. (Note that the question of what constitutes a mental "defect" is a value-judgement. In homosexuality, for example, a defect? Some homosexuals would say (UI). But there is no objectively true or false answer to such a question.) As methods are improved to the point where the minority of parents who use genetic engineering are producing noticeably healthier, smarter offspring, more and more parents will want genetic engineering. When the majority of children are genetically engineered, even those parents who might otherwise be

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antagonistic toward **genetic engineering** will feel obliged to use it so that their children will be able to compete in a world of superior people—superior, (UI) relative to the social milieu in which they live. In the end, genetic engineering will be made compulsory, because it will be regarded as cruel and irresponsible for a few eccentric parents to produce inferior offspring by refusing to use it. Bear in mind that this engineering will involve mental as well as physical characteristics; indeed, as scientists explain mental traits on the basis of **physiology, neurology, (UI) biochemistry**, it will become more and more difficult to distinguish between "**mental**" and "physical" traits.

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149. ...**Biological** methods probably will have to be used. We have already mentioned the use of **drugs** in this connection. **Neurology** may provide other avenues for modifying the human mind. **Genetic engineering** of human beings is already beginning to occur in the form of "**gene therapy**," and there is no reason to assume that such methods will not eventually be used to modify those aspects of the body that affect **mental** functioning.

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Observe that once a society based on psychological, genetic, and other forms of human engineering has come into being, **it will presumably last forever**, because people will all be engineered to favor human engineering and the totally collective society, so that they will never become dissatisfied with this kind of society. Furthermore, once human engineering, the linking of human minds with computers, and other things of that nature have come into extensive use, people will probably be altered so much that it will no longer be possible for them to exist as

U-14

129. Another reason why technology is such a powerful social force is that, within the context of a given society, technological progress **inarches in only one direction; it can never be reversed...**

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independent beings, either physically or psychologically. Indeed, technology has already made it impossible for us to (UI) as physically **independent** beings, for the **skills** which enabled **primitive man** to live off the country **have been lost**. We can survive only by acting as components of a huge machine which provides for our physical needs; and as technology invades the domain of the mind, it is safe to assume that human beings will become as dependent psychologically on technology as they now are physically. We can see the beginning of this already in the

U-14

61. In **primitive societies**, physical necessities generally... can be obtained, but only at the cost of serious effort. But modern society tends to guaranty the physical necessities to everyone in exchange for only minimal effort...

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inability of some people to avoid **boredom without television** and in the need of others to use tranquilizers in order to cope with the tensions of modern society.

The **foregoing predictions** are supported by the opinions of at least some responsible writers. See especially Jacques Ellul's "The Technological Society" and the section titled: "Social Controls" in Kahn and Weiner's "The Year 2,000."

U-14

147. ...most modern people must be constantly occupied or entertained, otherwise they get **"bored,"** i.e. they get fidgety, uneasy, irritable.

45. Any of the **foregoing symptoms** can occur in any society...We aren't the first to mention that the world today seems to be going crazy...

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Now we come to the question: What can be done to prevent all this? Let us first consider the solution sketched by Perry London in his book "Behavior Control." This solution makes a convenient example because its defects are typical of other proposed solutions.

London's idea is, briefly, this: Let us not attempt to interfere with the development of behavioral technology, but let us all try to be as aware of and as knowledgeable about this technology as we can; let us not keep this technology in the hands of a scientific elite, but disseminate it among the population at large; people can then use

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this technology to manipulate themselves and protect themselves against manipulation by others. However, on the grounds that "there must be some limits" London advocates that behavior control should be imposed by society in certain areas. For example, he suggests that people should be made to abhor violence and that psychological means should be used to make businessmen stop destroying our forests. (NOTE: **I do not currently have access to a copy of London's book,** and so I have had to **rely on memory** in describing his views. My memory is probably correct here, but in order to be honest **I should admit the possibility of error.**)

U-14

231. ...**Lack of sufficient information** and the need for brevity made it impossible for us to formulate our assertions more precisely or add all the necessary qualifications. And of course in a discussion of this kind one must **rely heavily on intuitive judgment, and that can sometimes be wrong...**

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My first objection to London's scheme is a personal one. I simply find the **sphere of freedom** that he favors too **narrow** for me to accept. But his solution suffers from other flaws.

He proposes to use psychological controls where they are not necessary, and more for the purpose of gratifying the liberal intellectual's esthetic sensibilities than because of a practical need. It is true that "there must be some limits"—on violence, for example—but the threat of imprisonment seems to be an adequate limitation. To read about violence is frightening, but violent crime is not a significant cause of mortality in

U-14

93. We are going to argue that industrial-technological society cannot be reformed in such a way as to prevent it from progressively **narrowing the sphere of human freedom...**

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comparison to other causes. Far more people are killed in automobile accidents than through violent crime. Would London also advocate psychological elimination of those personalities that are inclined to careless driving? The fact that **liberal intellectuals** and many others get far more excited over violence than they do over careless driving would seem to indicate that then- antagonism toward violence arises not primarily from a concern for human life but from a strong emotional antipathy toward violence itself. **Thus it appears that London's proposal to eliminate violence through psychological control results not from practical necessity but from a desire on London's part to engineer some of his own values into the public at large.**

U-14

17. ...modern **leftish intellectuals...***

220. ...**the leftist is motivated less by distress at society's ills than by the need to satisfy his drive for power by inposing his solutions on society.**

☒Explanatory note: In U-14, paragraph 16, FC writes "...play little role in the liberal and leftist vocabulary." It appears that FC equates the terms liberal and leftist.

This becomes even clearer when we consider London's willingness to use psychological engineering to stop businessmen from destroying our forests. Obviously, psychological engineering cannot accomplish this until the establishment can be persuaded to carry out the appropriate program of engineering. But if the establishment can be persuaded to do this, then they can equally well be persuaded to pass conservation laws strict enough to accomplish the same purpose. And if such laws are passed, the psychological engineering is superfluous. It seems clear that here, again, London is

attracted to psychological engineering simply because he would like to see the general public share certain of his values.

(Pages 33 through 37 represent Kaczynski's summary of London's book.)

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When London proposes to use systematic psychological controls over certain aspects of the personality, with the intention that these controls shall not be extended to other areas, he is assuming that the generation following his own will agree with his judgement as to how far the psychological controls should reach. This assumption is almost certainly false. The introduction of psychological controls in some areas (which London approves) will set the stage for the later introduction of controls in other areas (which London would not approve), because it will change the culture in such a way as to make people more

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receptive to the concept of psychological controls. As long as any behavior is permitted which is not in the best interests of the collective social organization, there will always be the temptation to eliminate the worst of this behavior through human engineering. People will introduce new controls to eliminate only the worst of this behavior, without intending that any further extension of the controls should take place afterward; but in fact they will be indirectly causing further extensions of the controls, because whenever new controls are introduced, the public, as it becomes used to the new controls, will change its

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conception of what constitutes an appropriate degree of control. In other words, whatever the amount of control to which people have been accustomed, they will regard that amount as right and good, and they will regard a little further extension of control as a negligible prices to pay for the elimination of some form of behavior that they find shocking.

London regards the (UI) dissemination of behavioral technology among the public as a means by which people can protect themselves against psychological manipulation by the established powers. But if it is really true that people can use this knowledge to avoid manipulation in most areas, why won't

T-2

they also be able to use it to avoid being made to abhor violence, or to avoid control in other areas where London thinks they should be controlled? London seems to assume that people will be unable to avoid control in just those areas where he thinks they should be controlled, but that they *will* be able to avoid control in just those areas where he thinks they should not be controlled.

T-2

London refers to "awareness" (UI) relating to the mind) as the individual's "sword and buckler" against manipulation by the establishment. In **Roman times** a man might have a real **sword** and buckler just as good as those of the emperor's legionaries, but that did not enable him to escape oppression. Similarly, if a man of the future has a complete knowledge of behavioral technology it will not enable him to escape psychological control any more than the possession of a machine-gun or a tank would enable him to escape physical control. The resources of an **organized society** are just too great for any individual to resist no matter how much he knows.

U-14

208. (Historical example)...When the **Roman Empire** fell apart...any skilled smith could make **steel** by **Roman methods**...

214. ...But this implies management of nature and of human life by **organized society**...

T-2

With the vast expansion of knowledge in the behavioral sciences, biochemistry, cybernetics, physiology, genetics, and other disciplines which have the potential to affect human behavior, it is probably already impossible (and, if not, it will soon become

impossible) for any individual to keep abreast of it all. In any case, we would all have to become, to some degree, specialists in behavior control in order to maintain London's "awareness." **What about those people who just don't happen to be attracted to that kind of science, or to any science?** It would be agony for them to have **to spend long hours studying** behavioral technology in order to maintain their freedom.

U-14

115. ...For example, the system needs scientists, mathematicians and engineers. It can't function without them. So heavy pressure is put on children to excel in these fields. It isn't natural for an adolescent human being **to spend the bulk of his time sitting at a desk absorbed in study**...But in our society children are pushed into studying technical subjects, which most do grudgingly.

119. ...A chorus of voices exhorts kids to study science. No one stops to ask whether it is inhumane to force adolescents to **spend the bulk of their time studying subjects that most of them hate**...

T-2

Even if London's scheme of freedom through "awareness" were feasible, it could, or at least would, be carried out only by an **elite** of intellectuals, businessmen, etc. Can you imagine the members of uneducated minority groups, or, for that matter, the average middle-class person, having the will and the ability to learn enough to **compete** in a world of psychological manipulation? It will be a case of the smart and the powerful getting smarter and more powerful while the stupid and the weak get (relatively) stupider and weaker, for it is the smart and the **powerful** who will have the readiest access to behavioral technology and the greatest ability to use it effectively.

***** U-14

175. ...We can imagine a future society in which there is endless **competition** for positions of prestige and **power**. But no more than a **very few people** will ever reach the top, where the only real power is...

T-2

This is one reason why devices for improving one's mental or psychological capabilities (e.g. biofeedback training, memory pills, linking of human minds with computers) are dangerous to freedom even though their use is voluntary. For example, it will not be physically possible for everyone **to have his own full-scale computer** in his

basement to which he can link his brain. The **best computer facilities will be reserved for those whom society judges most worthy: government officials, scientists, etc.** Thus the already powerful will be made more powerful.

U-14

174. ...In that case the **average man** may have control over certain private machines of his own, such as his car or his personal computer, but **control over large systems of machines** will be in the hands of a tiny **elite**...

190. ...The line of conflict should be drawn between the mass of the people and the **power-holding elite** of industrial society (politicians, **scientists**, upper-level business executives, **government officials, etc.**)...

T-2

Also, the use of such mind-augmentation devices will not remain **voluntary**. All our modern conveniences were originally introduced as optional benefits which one could take or leave as one chose. However, as a result of the introduction of these benefits, society changed its structure in such a way that the use of modern conveniences is now compulsory; for it would be physically impossible to live in modern society without extensively using devices provided by technology. Similarly, the use of mind-augmenting devices, though nominally **voluntary**, will become in practice compulsory. When these devices have reached a

U-14

173. ...But we are suggesting neither that the human race would **voluntarily** turn power over to the machines nor that the machines would wilfully seize power. What we do suggest is that the human race might easily permit itself to drift into a position of such dependence on the machines that it would have no practical choice but to accept all of the machines' decisions...

T-2

high development and have come into wide use, **a person refusing to use them would be putting himself in the position of a dumb animal in a world of supermen.** He would simply be unable to function in a society structured around the assumption that most people have vastly augmented mental abilities.

By virtue of their very power, the devices for augmenting or modifying the human mind and personality will *have to* be governed by extensive rules and regulations. As the human mind comes to be more and more an artifact created by means of such

devices, these rules and regulations will come to be rules and regulations governing the structure of the human mind.

U-14

174. ...People won't be able to just turn the machines off, because they will be so dependent on them that turning them off would amount to suicide.

175. ...They will have been reduced to the status of **domestic animals**.

T-2

An important point: London does not even consider the question of genetic engineering in infancy (let alone genetic engineering before conception). A two-year-old obviously would not be able to apply London's philosophy of "awareness; yet it may be possible in the future to engineer a young child so that he will grow up to have the type of personality that is desired by whoever has charge of him. What is the meaning of freedom for **a person whose entire personality has been planned and created by someone else?**

U-14

122. ...The only solution will be some sort of eugenics program or extensive genetic engineering of human beings, **so that man in the future will no longer be a creation of nature...but a manufactured product.**

T-2

London's solution suffers from another flaw that is of particular importance because it is shared by all libertarian solutions to the technology problem that have ever come to my attention. The problem is supposed to be solved by propounding and popularizing a certain libertarian philosophy. This approach is unlikely to achieve anything. Our liberty is not deteriorating as a result of any antilibertarian philosophy. Most people in this country profess to believe in freedom. Our liberty is deteriorating as a result of the way people do their jobs and behave on a day-to-day basis in relation to technology.

T-2

The system has come to be set up in such a way that it is usually comfortable to do that which strengthens the organization. When a person in a position of responsibility

acts to eliminate that which is contrary to established values, he is rewarded with the esteem of his fellows and in other ways. **Police officials** who **introduce new surveillance devices**, **educators** who introduce more **advanced techniques** for **molding children**, do not do so through disrespect for freedom;

U-14

147. ...techniques of **surveillance**... law enforcement...

148. ...**Education**...**motivating children**...and **psychological techniques**...

T-2

they do so because they are rewarded with the approval of other police officials or educators and also because they get an inward satisfaction from having accomplished their assigned tasks not only competently, but creatively. A hands-off approach toward the child's personality would be best from the point of view of freedom, but this approach will not be taken because the most intelligent and capable educators crave the satisfaction of doing their work creatively. They want to do *more* with the child, not less. **The greatest reward that a person gets from furthering the ends of the organization may well be simply the opportunity for purposeful, challenging, important activity—an opportunity that is otherwise hard to come by in this society.** For example, Marvin Minsky does not work on

U-14

39. We use the term "surrogate activity" to designate an activity that is directed toward an artificial goal that people set up for themselves merely in order to have some goal to work toward, or let us say, merely for the sake of the "fulfilment" that they get from pursuing the goal...

(Explanatory note: The above T-2 passage is similar to FC's explanation of "surrogate activity" in U-14/paragraphs 38-41.)

T-2

computers because he is antagonistic to freedom, but because he loves the intellectual challenge. Probably he believes in freedom, but since he is a computer specialist he manages to persuade himself that computers will tend to liberate man.

The main point here is that the danger to freedom is caused by the way people work and **behave on a day-to-day basis in relation to technology**; and the way people behave in relation to technology is determined by powerful social and **psychological**

forces. To oppose to these forces a comparatively weak force like a body of philosophy is simply hopeless. You may persuade

U-14

125. It is not possible to make a **LASTING** compromise between technology and freedom, because technology is by far the more powerful social force and continually encroaches on freedom through **REPEATED compromises...**

143. ...The kinds of **pressures** vary greatly from one society to another. Some of these pressures are physical (poor diet, excessive labor, environmental pollution), some are **psychological** (noise, crowding, forcing human behavior into the mold that society requires)...

T-2

the public to accept your philosophy, but most people will not significantly change (UI) as a result. They will invent rationalizations to reconcile their behavior with the philosophy, or they will say that what they do as individuals is too insignificant to change the course of events, or they will simply confess themselves too weak to live up to the philosophy. Conceivably a school of philosophy might change a culture over a long period of time if the social forces tending in the opposite direction were weak. But the social forces guiding the present development of our society are obviously strong, and we have very little time left—**another three decades likely will take us past the point of no return.**

U-14

129. Another reason why technology is such a powerful social force is that, within the context of a given society, technological progress **inarches in only one direction; it can never be reversed...**Technology repeatedly forces **freedom** to take a step back, but technology can never take a step back - short of the overthrow of the whole technological system.

T-2

Thus a philosophy will be ineffective unless that philosophy is accompanied by a program of concrete action of a type which does not ask people to voluntarily change the way they live and work—a program which (UI) little effort or willpower on the part of most people. Such a program would probably have to be a political or legislative one. A philosophy is not likely to make people change their daily behavior, but it might (with luck) induce them to vote for politicians who support a certain program. Casting

a vote requires only a casual commitment, not a strenuous application of willpower. So we are left with the question: What kind of legislative program would have a chance of saving freedom?

T-2

I can think of only two possibilities that are halfway plausible. The discussion of one of these I will leave until later. The other, and the one that I advocate, is this: In simple terms, stop scientific progress by withdrawing all major sources of **research funds**. In more detail, begin by withdrawing all or most federal aid to research. If an abrupt withdrawal would cause economic problems, then phase it out (UI) practical. Next, pass legislation to limit or phase out research support by educational institutions which accept public funds. Finally, one would hope to pass legislation prohibiting all large corporations

U-14

92. Thus science marches on blindly, without regard to the real welfare of the human race or to any other standard, obedient only to the psychological needs of the scientists and of the government officials and corporation executives who provide the **funds for research**.

T-2

and other large organizations from supporting scientific research. Of course, it would be necessary to eventually bring about similar changes throughout the world, but, being Americans, we must start with the United States; which is just as well, since the United States is the world's most technologically advanced country. As for economic or other disruption that might be caused by the elimination of scientific progress—this disruption is likely to be much less than that which would be caused by the extremely rapid changes brought on by science itself.

T-2

I admit that, in view of the firmly entrenched position of **Big Science**, it is unlikely that such a legislative program could be enacted. However, I think there is at least some chance that such a program could be put through, in stages over a period of

years, if one or more active organizations were formed to make the public aware of the probable consequences of continued scientific progress and to push for the appropriate legislation. Even if there is only a small chance of success. I think that that chance is worth working for, since the alternative appears to be the loss of all human freedom.

U-14

Note 13. (Paragraph 66) ...The conservatives are just taking the average man for a sucker, exploiting his resentment of **Big Government** to promote the power of **Big Business**.

T-2

This solution is bound to be attached as "simplistic," but this ignores the fundamental question, namely: Is there any better solution or indeed any other solution at all? My personal opinion is that there is no other solution. However, let us not be dogmatic. Maybe there is a better solution. But the point is this: If there is such a solution, no one at present seems to know just what it is. Matters have progressed to the point where we can no longer afford to sit around just waiting for something to turn up. By stopping scientific progress now, or at any rate slowing it drastically, we would at least give ourselves a breathing space during which we could attempt to work out another solution, if one is possible.

T-2

There is one putative solution the discussion of which I have reserved until now. One might consider enacting some kind of bill of rights designed to protect freedom from technological encroachment. For the following reasons I do not believe that such a solution would be effective.

In the first place, a document which attempted to define our sphere of freedom in a few simple principles would either be too weak to afford real protection, or too strong to be compatible with the functioning of the present society. Thus, a suitable bill of rights would have to be excessively complex, and full of

T-2

exceptions, qualifications, and delicate compromises. Such a bill would be subject to repeated amendments for the sake of social expedience; and where formal amendment is inconvenient, the document would simply be reinterpreted. Recent decisions of the Supreme Court, whether one approves of them or not, show how much the import of a document can be altered through reinterpretations. Our present Bill of Rights would have been ineffective if there had been in America strong social forces acting against freedom of speech, freedom of worship, etc.

Compare what is happening to the right to bear arms, which

T-2

currently runs counter to basic social trends. Whether you approve or disapprove of that "right" is beside the point—the point is that the constitutional guarantee cannot stand indefinitely against powerful social forces.

If you are an advocate of the bill-of-rights approach to the technology problem, test yourself by attempting to write a sample section on, say, genetic engineering. Just how will you define the term "genetic engineering" and how will you draw the line, in words, between that engineering which is to be permitted and that which is to be prohibited? Your law will either have to be too

T-2

strong to pass; or so vague that it can be readily reinterpreted as social standards evolve; or excessively complex and detailed. In this last case, the law will not pass as a constitutional amendment, because for practical reasons a law that attempts to deal with such a problem in great detail will have to be relatively easy to change as needs and circumstances change. But then, of course, the law *will* be changed continually for the sake of social expedience and so will not serve as a barrier to the erosion of freedom.

T-2

And who would actually work out the details of such a bill of rights? Undoubtedly, a committee of congressmen, or a commission appointed by the president, or some other

group of organization men. They would give us some fine libertarian rhetoric, but they would be unwilling to pay the price of real, substantial freedom—they would not write a bill that would sacrifice any significant amount of the organization's power.

I have said that a bill of rights would not be able to stand for long against the pressure for science, progress, and improvement. But laws that bring a halt to scientific research would be quite different in this respect.

T-2

The prestige of science would be broken. With the financial basis gone, few young people would find it practical to enter scientific careers. After, say, three decades or so, our society would have ceased to be progress-oriented and the most dangerous of the pressures that currently threaten our freedom would have relaxed. A bill of rights would not bring about this relaxation.

This, by the way, is one reason why the elimination of research merely in a few sensitive areas would be inadequate. As long as science is a large and going concern, there will be the persistent temptation to apply it in new areas; but this pressure would be broken if science were reduced to a minor role.

U-14

40. ... Scientific work may be motivated in part by a drive for **prestige...**

152. ...inducing **young people** to study **science and engineering...**

T-2

Let us try to summarize the role of **technology** in relation to **freedom**. The principal effect of technology is to increase the power of society collectively. Now, there is a more or less unlimited number of value-judgements that lie before us; for example: whether an individual should or should not have puritanical attitudes toward sex; whether it is better to have rain fall at night or during the day. When society acquires **power** over such a situation, generally a preponderance of the social forces look upon one or the other of the alternatives as Right. **These social forces** are then able to use the machinery of society to impose their choice universally; for example, they may mold children so successfully that none ever grows up to have puritanical attitudes toward sex, or they may use weather engineering to guarantee that rain falls only at night. In this way there is a continual narrowing of the possibilities that exist in the

world. The eventual result will be a world in which there is only one system of values. The only way out seems to be to halt the ceaseless extension of society's power.

U-14

113. ...**freedom** and **technological progress** are incompatible.

134. ...technology is a more powerful **social force** than the aspiration for **freedom...**

T-2

I propose that you join **me and a few other people** to whom I am writing in an attempt to found an organization dedicated to stopping federal aid to scientific research. I realize that you will probably reject this suggestion, but I hope that you will not reject it on the basis of some vague dogma such as knowledge is good (UI) the hope of (UI). Okay, knowledge is good, but how high a price, in terms of freedom, are we going to pay for knowledge? You may be understandably reluctant to join an organization about which you know nothing but you know as much about it as I do. It hasn't been started yet. You would be one of the founding members. I claim to have no particular qualifications for trying to start such an organization, and I have no idea how to go about it. I am only making the attempt because no better-qualified person has yet done so. I am simply

trying to bring together a **few highly intelligent and thoughtful people** who would be willing to take over the task. I would prefer to drop out of it personally because I am unsuited to that kind of work; in fact I dislike it intensely.

U-14

187. On the more sophisticated level the ideology should address itself to **people** who are **intelligent, thoughtful** and rational. The object should be to create a core of people who will be opposed to the industrial system on a rational, thought-out basis, with full appreciation of the problems and ambiguities involved... It is particularly important to attract people of this type, as they are capable people and will be instrumental in influencing others...

188. ...it will be more advantageous in the long run to keep the loyalty of a **small number of intelligently committed people...**

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