Computers and Freedom, Individuality and Automation: Challenge and Opportunity

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First, I want to question certain widely accepted assumptions about individuality and automation. Some of the premises contradict Aristotle (for which reason alone they might constitute an intellectual challenge); others, if they continue to be held, will hinder us in our attempt to derive solutions for a problem that demands to be solved in our time.

Many social critics, but particularly amateur social critics, assert that ours is an age in which individuality — the freedom of a man to exercise choice according to his own scale of preference — is threatened more than at any time in recorded history. It is further asserted that this freedom is particularly threatened, contrary to Aristotle, by automation. These beliefs are predicated, necessarily, on the assumption that individuality has "always" existed in substantial measure for most of the human race or, at least, that it now so exists.

For example, the Connecticut Mutual Life Insurance Company conducted an essay contest in 1963. The subject was "Preserving the Individual in an Age of Automation." Among other things the brochure describing rules for the contest had this to say:

"We seek ideas on how individuality and the importance of the individual can be preserved as automation progresses. How can we best meet the challenge of automation without destroying the dignity of the individual and opportunity for the individual — in business and society?"

I believe that neither contention — the existence of individuality and the threat to individuality — is warranted because neither can be supported by facts.

For the majority of humans life is, and always has been, a struggle for existence, a struggle often so overwhelmingly insistent that there is little or no time to pursue any course of action — regardless of one's preference — that does not contribute directly to the needs of maintaining existence. It is only when relieved from this struggle that man may seek, and confidently expect to find, opportunities for the meaningful exercise of choice that is individualism.

There is an abundance of evidence — in the literature and in everyday discourse — to suggest that the prevailing view of the computer as a threat to man's freedom, his individuality is the "correct" one. In this essay I want to challenge that notion, which is predicated on a limited sample of what is, not on what can be or ought to be; a different sample might suggest, instead, as I will advance in what follows, that freedom and individuality — their presence and their promise — are enhanced by the actual and forecast use of this extension of man's intellect.

More than 2000 years ago Aristotle prophesied that "When looms weave by themselves, man's slavery will end." Not until two centuries ago, however, when man began to harness the energy of steam, was there reason to await expectantly the reality of the prophecy. Now, in the latter third of the 20th century, looms do weave by themselves, but man's slavery is not yet ended. It is a proper time, therefore, to inquire if freedom is in sight and, if it is, whether we may do anything to hasten our journey to the goal long sought.

Before we begin the inquiry we must agree on what shall be understood by the words "individuality" and "automation." By "individuality" I mean "freedom to exercise choice according to one's own scale of preference." To give this definition added meaning and scope, I require that the mature person be capable of creating scales of preference suited to his purposes, or that he be able to evaluate and choose among existing scales. It is not that individuality vanishes in the absence of the ability to select one's own scales of preference, I feel; rather, the fuller realization of individuality cannot be attained without it. In this view, the full measure of individuality may be sought wherever there is opportunity for each man to be what he wishes to be. (Naturally, the abuse of freedom that is called "license" can be expected to cause the imposition, by society, of restraints that may preclude the realization of complete individuality by every man. It is not my purpose to discuss such matters here, however, since they are not germane to the central issue of this presentation.)


"Originally coined to describe the automatic handling of parts between successive stages of production, automation was later defined as the use of machinery to control machinery. In popular discussion, however, the word has come to mean any kind of technological change, particularly where non-human effort is substituted for human labor." In this essay I define automation as popular discussion has it, according to Mr. Fuchs.
This is a lesson we may learn from history if we learn nothing else:

1. The monuments that commemorate man's stay on earth—be they intellectual or otherwise—have not been created by serfs toiling ceaselessly to gain their daily bread; rather, they have been made by freedmen, men released from the suffocating and destructive effects of a life little removed from slavery, men for whom "exercise of choice" is not just a hollow phrase.

2. Even where there are no monuments to mark a man's life on earth, contemporary accounts of the common man's daily life—for example, Dickens' descriptions of 19th century England, Upton Sinclair's descriptions of early 20th century America—clearly describe that life as one of little meaningful individuality.

By what means is man to be liberated from the condition of slavery that is the engrossing struggle for existence? The means are to be found in the age of automation, an age in which the growth of knowledge, and the burgeoning of a technology to exploit that knowledge, promise to provide man with the means for controlling and shaping his environment to such an extent that he need not devote the major share of his energies to the struggle for subsistence. In the age of automation, the automaton—the non-human slave—will be man's liberator.

It may be argued that free men cannot tolerate a society based on slavery. But, I hasten to point out, it is human slavery which is objectionable. It is precisely because the age of automation is to be based on the exploitation of the non-human slave that so many men can expect to be set free. In this view, however, it is clear that man's individuality is not threatened by the age of automation (although his very existence may be). On the contrary, the first substantial opportunities for freedom for the majority of humans can be expected to come from the increasing application, at an increasing rate, of automation and its associated technologies to those elements of life that comprise the struggle for existence.

The age of automation is not without its perils, of course. There is evidence of two principal dangers as the automaton looms larger on man's horizon. The effects of both dangers can be minimized—at least, very substantially reduced—fortunately, because both are clearly discernible and there is time to prepare protection against them. The first danger results from the prevailing view of the automaton as a competitor to man in his struggle for existence. The freedom man seeks cannot be won by entering into competition with the non-human slave on its own terms: in such a struggle not only must the individual human be vanquished, but society itself may be destroyed (as Norbert Wiener has already pointed out in his book *The Human Use of Human Beings*).

Much contemporary writing indicates that its authors are confused about the nature of the man-automaton relationship. In one way or another, most writing depicts the relationship as one essentially of conflict and, hence, discusses possibilities for limiting or containing the casualties. Such writing is doubly unfortunate. On the one hand it perpetuates erroneous attitudes. On the other hand, such writing hinders man's understanding of the real nature of the man-automaton relationship—the automaton is man's slave. Because such understanding is denied him, man is unable to construct or consider acceptable alternatives to the unquestioned conventional wisdom: the automaton is a threat to man almost without redeeming features.

It is probably true that the prevailing view of the supposed conflict between man and the automaton are logical consequences of the value system inherent in our contemporary socio-economic beliefs. But one must not conclude automatically, therefore, that automation is "wrong." It is my view, rather, that if individuality is worth attaining—and I assert categorically that it is—we must question the mores, the taboos, the assumptions of our socio-economic structure which threaten to be an insurmountable obstacle to the successful quest for man's freedom. In particular, we need to reconsider how, and for what, a man is compensated for "working."

This leads us directly to the second principal danger that confronts civilization as it considers the effects of the age of automation: if the non-human slave that is the automaton is to relieve man of the need to earn his daily bread by the sweat of his brow, will he do with himself? Clearly, the answer is that man must be prepared to exercise that freedom of choice, each man according to his own scale of preference. It is a tragedy of our time that men now living have already met the non-human slave "in battle" and been vanquished by it. Such men can never conceive of the automaton as emancipator: they are unprepared for freedom; they have been too long engaged in the all-engrossing struggle for existence, a struggle that is so significant and meaningful a part of their lives that it is too late to find an adequate substitute for it.

In this matter it is not enough to consider only how and for what a man is compensated. The loss of his livelihood is indeed a serious matter, but the ability to find an adequate substitute is critical, both for the individual and his community. It is essential, therefore, for man to consider what price he is willing to pay for the privilege of maintaining socio-economic value systems that deny him acceptable solutions to a major problem of his time.

As is often the case, the future appears to lie with our children: then we can educate, to prepare them for a life of freedom, to prepare them to question the traditional values which place such severe limitations on the realization of the goal now so clearly seen. Paradoxically, this effort to assure the ability to become and remain an individual must be a collective effort, the focal point of society's determination of the worth of individuality; at the very least, what is required is an expression of the collective will that the goal is worth seeking.

Fortunately, our children—large numbers of them—have given evidence of their willingness to accept the challenge of such change; we can do no less than pick up the gauntlet with them. Their demands are for relevance, for person-centered, rather than scholarship-centered, education, whereas, according to Dr. Charles DeCarlo, President of Sarah Lawrence College, "Apparently the ideal of much current education is to produce a 'functioning' person—one whose behavior fits social needs regardless of what he (the student) may experience internally. Because there is such emphasis upon actions rather than feelings, the system is going through some rough times in handling the adolescent years."1

"It is strange to observe that at this point in history when we literally have the knowledge and material resources to do almost anything we choose—from putting a man on the moon, to exploring the depths of the oceans, to providing an adequate measure of life's goods to every person on earth—we also seem the most confused about what is worth doing. The great problems facing us are a sort where we need belief in ourselves and will to act even more than we need new technologies, creative social program concepts and program budgeting."2

It is clear that freedom will not be easily won, nor, when achieved, will it necessarily be easily preserved. But, in Robert Browning's words, A man may pow'rly

Should exceed his grasp.

Or, what's a heaven for?

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1 "The 'System' has got to go," *College Management*, June/July/August 1968, pp 14-18.