Towards the Humanization of Technology

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Is Armageddon inevitable? Will man die by his own hand through technological development? Mr. King begins his response to Dr. Berkner's challenge by asking these key questions — questions that were also asked 21 years ago at the Nuremberg trials. The author examines the law's response to these questions and finds it wanting. Technology is morally neutral; thus, morality and its physical embodiment, law, must relate technological change to human values. The challenge then is not to the law but to the lawyers, and it is they, charges Mr. King, who have not met it. Mr. King concludes with optimistic hope that the response may yet be forthcoming if the men of law recognize and shoulder the burden that is theirs.

Just 21 years ago, at a somber gathering in a major European city which had been reduced to rubble, a man soon to be adjudged guilty of crimes against humanity made the following statement:

Will there ever again be a nation which will use the technical discoveries of this war for the preparation of a new war, while the rest of the world is employing the technical progress of this war for the benefit of humanity, thus attempting to create a slight compensation for its horrors? As a former minister of a highly developed armament system, it is my last duty to say the following: A new large-scale war will end with the destruction of human culture and civilization. Nothing can prevent unconfined engineering and science from completing the work of destroying human beings, which it has begun in so dreadful a way in this war.¹

I have quoted the foregoing because it raises some fundamental questions. The author of the statement and the occasion will perhaps surprise you. The man who made these remarks was Albert Speer, the Nazi Minister of War Production. The occasion was the closing day of the Nuremberg trial — August 31, 1946. Speer had been the master of German technology and the man under whom such technology had flourished. He had been so successful in di-

¹ Testimony of Albert Speer, quoted in 22 Trial of the Major War Criminals Before the International Military Tribunal, Nuremberg, Germany, 14 Nov. 1945, 10 Oct. 1946, 405-407 (1947-1949).
recting that technology that he was credited by some with prolonging the end of World War II by almost 2 years.

When he spoke, the hour was late for Speer and the hands of the clock were approaching midnight; for all Speer knew on that fateful day, he was headed for the gallows. Yet, in a profound sense, Speer seemed to stand alone among the Nazi defendants as a free man, and his words therefore ring with meaning. His trial had raised such sweeping and important questions concerning humanity as a whole that it seemed to him that his own personal fate was of no consequence.

On that day, Speer’s approach was not that of an apologist for the Nazi regime, nor was it that of a weak man disclaiming any participation in what had been done. His approach was that of the questioning spirit, particularly as to the value of technology per se. He was questioning whether man would be able to control technology and institutionalize its uses for the benefit of humanity. He was setting forth his belief that technological change would outrun man’s ability to control the uses of technology and that the pace of developments in the field of technical knowledge would in all probability outrun the application of the law and social controls over technology. Speer was saying that technology can be so advanced that its primary use would be to control, manipulate, and destroy people. In effect, Speer was forecasting that man would die by his own hand because of technological developments.

Implicit in Speer’s statement are certain conclusions that are of significance for us now: first, that technology is not an end in itself and should not be glorified as such; second, that the value of technological changes can only be judged on the basis of how such changes can be used for the benefit of humanity; third, that technology in and of itself contains no built-in restraints which limit its use for nonhumanitarian purposes; fourth, that the law has to be the arbiter of technology and must question the uses to which technology is put so that uncontrolled technology does not bring about the destruction of humanity through war, and so that technology is used to improve the lot of humanity.

The problem with which Speer was dealing has been greatly accentuated because the rapid growth of technological know-how has outstripped the ability of the law to respond with equal speed. Ideally, the law must continually address itself to the uses to which technology is put; but, to be effective, the response of the law must
be quick, immediate, and commensurate with the magnitude of the
problem.

The two-pronged effect of the destructive uses of technology
can be recognized when it is kept in mind that such a course not
only increases the risk that mankind will destroy itself through the
use of advanced technological weapons, but also denies the poten-
tial benefits of such technology to those who so badly need them.

As Dwight Eisenhower, the only military man to occupy the
White House in our time, said in 1953:

Every gun that is made, every warship launched, every rocket
fired signifies — in the final sense — a theft from those who
hunger and are not fed, those who are cold and are not clothed.

This world — in arms — is spending . . . the sweat of its la-
borers, the genius of its scientists, the hopes of its children.

The cost of one modern heavy bomber is this: A modern brick
school in more than thirty cities.

It is: Two electric power plants, each serving a town of 60,000
population.

It is: Two fine, fully-equipped hospitals.

It is: Some fifty miles of concrete pavement.

We pay for a single fighting plane with a half-million bushels
of wheat.

We pay for a single destroyer with new homes that could have
housed more than 8,000 people.

This is not a way of life at all, in any true sense. . . . Is there
no other way the world may live?2

It should not be forgotten that as we build our armaments on a
massive scale we divert our manpower and resources from the
task of feeding, clothing, and sheltering the world’s population.
Thereby, we make the task of demagogues, who seek to politically
arouse the peoples of the underdeveloped countries against us and
the other “have” nations in the world, just that much easier.

Again, it was Albert Speer who dramatically articulated the
challenge to the law in the international area resulting from tech-
nological changes when he said:

Therefore this Trial must contribute towards preventing such de-
gennerate wars in the future, and towards establishing rules whereby
human beings can live together. Of what importance is my own
fate, after everything that has happened, in comparison with this
high goal?3

Let us examine the response of the law to Speer’s challenge in
the 21 years which have intervened since he made his statement.
Generally, it may well be that international law and agreements

2 N.Y. Times, Apr. 17, 1953, § 1, at 4, cols. 3-4.
3 Testimony, supra note 1, at 407.
among nations reached their zenith at the time of the Nuremberg trial. The actual holding of the trial meant that the most powerful nations of the world at that time had agreed on certain rules for the punishment of offenders against peace and for the establishment of an institution — namely, The International Military Tribunal — to punish such offenders. Perhaps it can be said that this was the high water mark of the response by the law to the challenge of technology, and that since that time the law has been retreating in the face of new and dramatic technical developments. But, let us be specific and document some of the areas of concern. These include the following:

1. Nuclear Technology. According to the 1964 estimate of Secretary of Defense McNamara, 149 million people would be killed in the first hours of a nuclear war.\(^4\) Casualties in such a war would be high on both sides, raising the question whether there would be victors and vanquished. Yet, in this area the law has had very little effect in controlling the onrush of technology. The only control over nuclear activity actually established was the partial nuclear test ban treaty which was signed in 1963.\(^5\) This treaty did not include primary nuclear powers such as France and China, and was, at best, only a very limited response to technological change. No new institutions have been created to enforce the treaty, and there is in effect today no enforceable nuclear control system or accepted method for verification or nonverification of nuclear activity. Moreover, there is as yet no nonproliferation treaty. On the basis of the foregoing, I think that we can conclude that we have not met Speer’s challenge in the nuclear area.

2. Nuremberg. Nuremberg represents a step forward in international law by its attempt to establish some international standard of behavior for men and nations. But, since 1946, when the Nuremberg judgment was rendered, there has been no institutionalization of the principles that the participating nations agreed upon as the basis for the Nuremberg trial. Despite intensive efforts on the part of some members of the United Nations, no code has been agreed upon by the major nations of the world to clarify and institutionalize the Nuremberg principles, whether imposing sanctions on crimes against the peace of the world, crimes against the laws of war, or crimes against humanity in the form of genocide. No

\(^4\) N.Y. Times, Feb. 19, 1965, § 1, at 1, col. 7.

international court has been established to enforce the Nuremberg principles and no international police force presently exists to apprehend individuals guilty of violating the laws of war or of crimes against peace or humanity.

Suffice it to say that society has not implemented the precedent established at Nuremberg of applying international law to the areas covered at Nuremberg. Suffice it to say that in this area society did not meet Speer's challenge and, if anything, society is not in as favorable a position today as it was in 1946. This lack of progress is accentuated by technical change which has occurred in the 21 years since Nuremberg.

The prior use of force was what made possible the application of the Nuremberg principles. International law has always recognized the legitimacy of the use of force in certain circumstances. The question which Nuremberg raised was whether it was just for the victor to apply his own version of international law to the vanquished. To give the Nuremberg principles real effect in the international community, it is necessary that they be enforced not by victories on the field of battle, but by international institutions recognized in advance as having the right and responsibility to enforce such principles.

3. United Nations. In 1945, the United Nations (U.N.) was established. During the period of Dag Hammarskjold's leadership the United Nations to a degree fulfilled its destiny, and U.N. peacekeeping operations were set up in the Middle East, the Congo, and Cyprus. But, primarily because of the veto power, the U.N. has not been an effective instrument for preserving the peace of the world. The U.N. action was possible despite divergent interests of the great powers only in Korea when the Russian delegates walked out of the U.N.

We have not seen any system of world courts established by the U.N. for the settlement of disputes between nations or between individuals and nations. To be workable, such courts would have to be vested with compulsory jurisdiction and the leading nations of the world could not exempt themselves from compliance with the judgments of such courts. There is no nation in the world today which the rule of law or the protective umbrella of the U.N. has made safe from attack. There is no system of international law which provides for equal protection of all nations, and nations which want to follow purely peaceful pursuits are not secure by virtue of
the rule of law. Here, again, Speer’s challenge to the law to respond to the development of technology remains unanswered.

In summary, I think the following are relevant conclusions to the questions with which we are dealing today:

1. We should not confuse the excitement of technological change with meaningful scientific progress.
2. Technology is morally neutral; and, to be meaningful, technological change must be related to human values.
3. Certainly, we should ensure for the scientists and the specialists their freedom of conscience to refuse to work on technology. We should avoid a repetition of the Robert Oppenheimer case, where a man was put to public censure partly because of his recommendations concerning the hydrogen bomb program for which he showed an alleged lack of enthusiasm. Perhaps these protections to the scientist should be legally recognized. Perhaps society should insist that the scientist — that is, the eminent specialist working in his laboratory — also be a questioning spirit with regard to the morality of his work.
4. Superior technology does not in and of itself afford us national security. As Jerome Weisner and Herbert York, scientific advisors to Presidents Eisenhower and Kennedy, pointed out in 1964: “[T]he dilemma of steadily increasing military power and steadily decreasing national security . . . has no technical solution.” This is only to be found in the establishment of an international rule of law.
5. The Nuremberg principles need clarification and codification in light of current events. Nazis are still being tracked down for activities similar to those which were adjudged criminal at Nuremberg. The North Vietnamese have threatened to try American airmen for alleged crimes similar to those which were the subject of the Nuremberg judgment. Young men in this country are citing the Nuremberg judgment as their reason for rejecting the call of draft boards in this country. The time is now for clarification of the Nuremberg principles and the establishment of some international standards for judging criminal behavior by individuals and nations.

Lawyers, because of their comparatively broad education, have a special responsibility for raising and bringing into focus the moral issues which arise out of technological advances. In my view, we

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lawsyers to date have not met this challenge and time may, in fact, be running out on us. But, we must not be deflected by the awe-
some nature of the task, and we must maintain our sense of mission in attempting to carry it out. We must forever keep in mind the words of the aged Ulysses, who was impelled to exhaust his ener-
gies — even his life — in new probing of the unknown, when he addressed his mariners before departing:

Come my friends,
'Tis not too late to seek a newer world.
Push off, and sitting well in order smite
The sounding furrows; for my purpose holds
To sail beyond the sunset, and the baths
Of all the western stars, until I die.
It may be that the gulfs will wash us down:
It may be we shall touch the Happy Isles,
And see the great Achilles, whom we knew.
Tho' much is taken, much abides; and tho' We are not now that strength which in old days Moved earth and heaven, that which we are, we are;
One equal temper of heroic hearts, Made weak by time and fate, but strong in will To strive, to seek, to find, and not to yield.  

In addressing you here today, I have spoken in my capacity as a private American citizen who feels a sense of identity with the entire human race. In this context, I hope I have raised some of the central questions to which the law must respond if we expect to make the world safe, not for democracy, but for life itself.

7 ALFRED LORD TENNYSON, ULYSSES.