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Science in Christian Perspective

Good and Evil in Technology as a Question of Christian Values

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For many years technological progress was perceived as intrinsically good and necessary. Yet more and more people begin to question whether technology and the notion of progress can actually be called good. Some people even wish to do away with the idea of progress altogether and return to a lifestyle of simplicity. Indeed, what is good or evil in technology can neither be discerned in a piecemeal fashion nor can it be defined a priori. It must rather come to focus from the most universal perspective available to us as that which furthers the whole of humanity or detracts from this goal. Since humanity in its fullest sense can be viewed only in the horizon of eschatological perfection provided by Judeo-Christian tradition, good or evil is that which furthers or hinders the realization of the kingdom of God. Technology can then even be an expression of our attempt to respond to the promise of God's kingdom.

Lynn White in his provocative essay, "The Historical Roots of Our Ecological Crisis," has voiced the opinion that Christianity is the most anthropocentric religion on earth and largely responsible for our present exploitative attitude toward nature.¹ Many have followed his path in advocating alternative value systems in order to overcome the dangers inherent in Christian faith. Yet we wonder why an effective remedy in our attitude toward nature should not come primarily from the JudeoChristian tradition. If this tradition made it possible for our present technological age to develop, it might also be able to provide helpful guidelines for avoiding the adverse side-effects of technology as they show themselves, for instance, in the ecological crisis. Pursuing this idea, we investigate whether any conclusive statements can be made from the Christian tradition concerning good and evil in technology.

The Impact of Modern Technology

According to a dictionary, technology is "the branch of knowledge that deals with the industrial arts." This branch of knowledge has enjoyed an unprecedented expansion. The evolution and

refinement of machines within the last 100 years alone is comparable to a biological and behavioral evolution extending over one billion years.² With the help of technology more natural resources have been used since World War II than since the beginning of human history altogether. This rapidly accelerating potential and application of human possibilities have led to an ever increasing interdependence between us and our environment.

Increasing Interdependence between Humanity and Environment. Pre-technological humanity could afford a fairly casual attitude toward its environment. The environment was the shelter and home in which people lived. If the present environment no longer sufficed for their needs, they could move on to better quarters, leaving the exploited land behind. Similarly, waste products could be left behind or channeled into river systems that served as natural sewers. Due to the urbanization process and the increase in population these methods no longer suffice. The plight of many inner cities in American metropolitan areas shows us that at least the less prosperous segments of the population have to live with the garbage and the dilapidating houses that the affluent leave behind when they escape to suburbia.

Even the affluent can escape the impact of their neighbor's behavior in only relatively few instances and in small numbers. Unless they live in solitary isolation, their neighbors' lawn mowers contribute to the noise pollution, effectively disturbing a Sunday afternoon nap, and the teenagers' junkyards of old cars obliterate the view from the living room window. Increasing population and demands on the environment in terms of natural resources and recreational areas turn our environment into everyone else's environment. The way I treat my environment immediately affects my neighbors and their environment. Thus the quality of life can no longer be solved on an individual basis. Here lies the fallacy of rejecting the ethics of a spaceship and instead calling for those of a lifeboat.³

While it is certainly true that we can divide the world into a luxury club of roughly 400 million people and a poor peoples' club of more than 3 billion, none of the nations that have members in the luxury club is self-sufficient. The present dilemma of an adequate oil supply at a price that does not strain our balance of payments shows exactly that we are no longer, and perhaps never will be, independent. That the scientific laws we used for our first moon flight did not come from an all-American team, but from Galileo, Newton, Einstein, and von Braun should have told us this lesson years ago. A young and sparsely populated country such as the USA could never have reached its present level of technology without the help of millions of immigrants. However, now, having attained this level, we are in the same boat as most other industrialized nations. We can no longer do without continuous imports of raw materials. The industrialized nations depend on the resources of developing nations as much as or even more than the latter depend on the industrial goods and technological knowhow of the former. To assume that we can be our own neighbors neglects the fact of an ever increasing interdependence among nations, regardless of how far apart they may be geographically. Yet modern technology not only necessitates our dependence on larger and larger areas of our ecosphere, but also has become so ambiguous that it oscillates between the symbols of a sheep in wolf's clothes and a wolf in sheep's clothes.

Increasing Ambiguity of Technology. It was fairly easy to discern between the blessings and curses of the 19th century industrial revolution. Mass production, easy accessibility of goods, accelerated forms of communications, and improvement of the quality of life on all levels for

those who could afford it stand out as typical 19th century achievements. On the other hand we see a bleak world of the underprivileged vividly described by Charles Dickens with cities blackened by industrial soot, child labor, widespread poverty and unemployment, and an ever widening gap between the newly rich and the powerless and exploited factory workers. Our present technological evolution does not lend itself as easily to a clearcut description. Of course, we could refer to Jaques Ellul's *Technological Society*, to Leroy Augenstein's *Come, Let Us Play God*, or to Albert Rosenfeld's *The Second Genesis*, all of which eloquently point out the total grasp of technology on our lives. But none of these men is a doomsday prophet. They know too well that technology wears a Janus face, and that it is difficult at any time to be sure whether its newest phase is a boon or a disaster. Even such sobering predictions as Friedrich Ringer's *Failure of Technology*, Alvin Toffler's *Future Shock*, and the *Reports to the Club of Rome* do not leave us with a totally bleak picture. They show us the urgency of our present situation, pointing out that we are at the crossroads of history, either leading toward destruction or averting it. Even on the basis of their analyses it is rather difficult to decide which way to turn. One thing becomes clear, however. We cannot turn the wheel of history back, aborting our technological advancements. Our civilization is much too complex and we are much too removed from "a natural way of life" to be able to do without technology. Just imagine for one moment what our life would be like if we were not allowed to resort to pills when we are sick or to wear eyeglasses when our vision deteriorates. For better and for worse we cannot rid ourselves from the spirits we have called. But can we at least discern the spirits and avoid some of the more dangerous ones? Again there is no simple answer.

There is a tendency in new technologies to spiral toward increasingly ambivalent effects. With television, for instance, the polarization process not only occurs at more levels of involvement but tends to be less visible. Television programming is accused of filling minds with tripe even as it provides new and broader experiences for those watching it. Regardless how high our hopes are for educational TV, in general a mass medium such as TV creates its audience by its average. TV is able to shape the tastes of its audience. As a TV programmer freely admits, if the sports promoters prove uncooperative the TV networks "can create their own events, and the engines of publicity at their disposal will go into high gear to make sports created by broad casters more popular than those withheld from transmission." The TV broadcasters always "have in their power to undermine any uncooperative sport by filling the air with other entertainments calculated to keep the customers looking at the screen instead of going to the field or the arena.⁴ That soccer, for instance, does not make more inroads in the USA, and this means on TV, may be largely attributed to its continuous flow of action that does not lend itself to calculated interruptions by commercials.

Another example for the ambiguity of the new technology is the story of the Tennessee Valley Authority. With its control of disastrous floods and its cheap power for the multitudes it was one of the great achievements of the New Deal. But TVA has two faces:

One is composed of the green hills around Knoxville, enriched with cheap government fertilizer and green with pines planted with government subsidy. It sparkles with TVA lakes and hums with profits from a multitude of new industries attracted by a pleasant climate, abundant work, flood control, and dirt-cheap electricity. But TVA's other face is less pleasing to contemplate. The agency generates much more electricity from coal than from its hydroelectric dams, and fuel-buying policies have long been the subject of bitter controversy. By insisting on rockbottom coal prices for its growing string of huge steam plants, it has stimulated strip mining enormously, since only strip mines have been able to hold the price line and meet TVA's bid requirements.' On moral, social,

psychological, and economical levels the new technologies not only generate new benefits but counter those by breeding their own evils.⁶

Of course, we could say that this is the price we have to pay for technological progress. As there is no work without sweat, there is no benefit without threat. Yet what troubles more and more people is not that we have to pay a price, but that the threats are becoming bigger and bigger. The question that emerges here is: Can we afford the threats of tomorrow? Is it not too late once we detect some of the dangerous side-effects of technological evolution? Do we still have time to correct some of the dangerous aspects of technology that we have already discovered, such as diminishing natural resources and increasing pollution of our environment? What happens, for instance, if we find that the present crash program of building atomic power plants presents unforeseen problems in terms of nuclear and thermal wastes and production safety? These are not just questions of technological know-how. They are also and primarily questions of values, or briefly, ethical questions. In addressing the ethical aspect of our topic I am not pretending that Christianity has all the answers. I am deeply aware of Lynn White's observation that the doctrine of human dominion over nature is responsible for our present crisis. Yet I would side here with Ian Barbour and others who claim that there are other biblical doctrines that hold in check the mere pursuit of dominion.⁷ In striving for a Christian ethics of technology, however, one of our first tasks must be to discern between good and evil.

Towards a Christian Ethics of Technology

Discerning the Good and Evil. According to Greek thought the good is something to be attained through education and insight. In the Judeo-Christian tradition, however, the good is not an ideal to be aspired to. Adam and Eve's autonomous knowledge of good and evil led to

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Judeo-Christian tradition has no reason to reject modern technology as the result of human pride and sinfulness. We could even venture to say that it is part of our attempt to spiritualize the world in penetrating the material with the human spirit.

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disaster. In most instances the Old Testament term good is closely connected with the understanding of a personal God. "Give thanks to the Lord, for he is good" (I Chron. 16:34), is one of the basic confessions of the Old Testament. God's goodness shows in his benevolence, in his wanting and doing the good for his people. This is true both for salvation experienced in history and for the eschatological salvation promised as the end of history (Ex. 18:9, Isa. 52:7).⁸ Since God is good and working in goodness, we are supposed to respond to him by showing an analogous way of conduct. Thus the prophet Micah can remind the Israelites: "He (Yahweh) has showed you, O man, what is good; and what does the Lord require of you but to do justice, and to love kindness, and to walk humbly with your God?" (Micah 6:8).

In the New Testament these tendencies are reaffirmed. We hear Jesus say that "no one is good but God alone" (Mk. 10:18). We also notice Paul saying that our natural existence is excluded from the good. Regardless of our longing for the good, we cannot realize it as humanists would make us believe (Rom. 13:4). But only in discerning the will of God can we attain a notion and a realization of what is good (Rom. 12:2). The question which now emerges is: How can we reach

such discernment? The answer we obtain in the New Testament is that we are able to discern the good and even accomplish it if we identify ourselves with Christ. However, in the New Testament the good is always spoken of in imperative clauses, indicating both the urgency of doing the good and also conceding that not everybody does it.

Concluding our short survey we notice that good is neither something that is located within us or outside us in nature. It is neither a human phenomenon nor does it reflect some kind of naturalness. Good is whatever is in conformity with God's will. Yet good is not an attribute of God unrelated to our experience of him. God's goodness expresses itself in benevolent action and is witnessed by the Judeo-Christian community through God's saving action in history, including the life and destiny of Jesus the Christ. Especially in the life and destiny of Jesus the Christ it becomes clear that God's goodness is not reserved for a privileged ethnic or geographical minority. All people are invited to participate in it and respond to it. God's saving action, however, should not be misconstrued as an intervening action from outside, with God acting like a *deus ex machina*. His saving actions have eschatological significance in being directed toward a goal, the re-creation and perfection of his creation. The events of this world and our participation in them obtain their meaning and significance from this final goal toward which all history is moved through God's goodness. In many instances, the adoption of such an eschatologically focussed universal historical understanding of the good would eliminate many prevalent notions of the good. What is good could no longer be decided by considering solely individual, group, or national interests.

According to Judeo-Christian tradition an understanding of good that neglects its eschatological universal historical horizon would rather be termed evil. Already Israelite history tells of people closing themselves off from this universal horizon. Consequently evil descends upon them. For instance, in Jeremiah 6:19 we hear Yahweh say: "Hear, O earth; behold, I am bringing evil upon this people, the fruit of their devices, because they have not given heed to my words; and as for my law, they have rejected it." Yet evil does not descend upon the people like a primordially decreed fate. Both Old and New Testament witness to the evil which is located in the heart or in the midst of human existence (Jer. 7:24; Mk. 7:22f.). Evil is not something that stems from God or is associated with him so that we might find an excuse for our evil inclinations (James 1: 13). Evil is narrowing down the world to our own sphere and asserting that a partial good is the good. An illustration of this perversion can be found in the phrase: "What is good for General Motors is good for the U.S.A." The good for individuals, even corporate individuals, must always be envisioned contextually without neglecting the ultimate historical horizon which is at the same time the eschatological horizon. It is exactly the neglect of this ultimate horizon, the assumption that technology is for the good of humanity, individually or corporately conceived, that brought upon us the present crisis.

Dynamic and Re-evaluative Ethics. Judeo-Christian tradition has no reason to reject modern technology as the result of human pride and sinfulness. Modern technology does not exhibit a greater degree of human sinfulness than did the mallet which Cain lifted to slay his brother Abel. Modern technology can be understood as responding to the command to subdue the earth. We could even venture to say that it is part of our attempt to spiritualize the world in penetrating the material with the human spirit, uncovering the orders by which it is held together and rearranging them anew.' Thus our world is becoming more spiritualized and more humanized.

Technology is an intrinsically human phenomenon. Corresponding to our own historical and spiritual evolution, technology is evolving too. Especially in the present North-South and East-West dichotomy we notice a close relationship between a cultural, intellectual, and spiritual level and a certain level of technology. Of course, a more sophisticated technology does not imply a better technology in a moral sense. For instance, the export of sophisticated technology, especially in terms of arms, to the Near East and the Far East has not contributed to the ethical advancement of the people in these regions. If modern technology is a human phenomenon, it is neither conducive to a morally good or a morally evil behavior, nor is its application ethically neutral. Modern technology always reflects the spirit of the people by whom it is developed and administered. Does this mean that everything depends on our control and that good and evil in technology are simply a matter of controlling the controllers? Again, we cannot answer with an unqualified yes.

If the demand for stringent controls that is voiced more and more often these days would be met, it would not automatically result in benevolent action. In some dimensions control is impossible or futile since the results of technology are to some extent unpredictable. For instance, when many people moved out to new and pleasant homes in suburbia, who could then foresee that this would put us into a terrible bind in terms of our dwindling fuel resources? Given new circumstances and new data, something that has been advocated as good may suddenly be considered as evil. If something previously labeled good now turns out to be evil, what standards or procedures should the controllers employ to determine what should be done and what should be avoided?

It is perhaps good here to remember that in the Judeo-Christian tradition good is envisioned contextually in considering the universal historical horizon in which a decision is made. Terming something evil that was once considered good would only lead to arbitrary and relativistic ethics, if the decision to call it evil resulted from the volition of the controller. However, if new data and circumstances necessitate such change, the basic perspective of a universal historical horizon for ethics need not be changed. Yet what needs to be changed continuously, or rather enlarged, is the horizon in which the ethical situation arises. Taking seriously how the good is envisioned in the Judeo-Christian tradition, we notice three items:

1. An ethical judgment can no longer be rendered by exclusively resorting either to religious values or to scientific data. The sciences, researching the world of phenomena, and religion, giving account of ultimate values, must cooperate to answer the basic questions of humanity. The simple call for controllers of technology is too simplistic. If science dominates at the expense of religion, we get a picture of human life void of ultimate values. And if religion rules supreme to the exclusion of science, our understanding of human life lacks verifiable data. Only through cooperation between science which provides data, philosophy which provides conceptual forms, and theology which provides values, can the perplexing questions raised by technology be answered with clarity, authority, and confidence.

2. Since our historical, conceptual, and technological horizon is constantly expanding, ethical judgments have to be re-evaluated constantly in close and continual cooperation between Christian ethical theorists and data-providing scientists to assure a truly universal historical horizon in which the ethical situation can be properly perceived. Since new technologies have an increasingly profounder impact on their areas of application and on ever wider tangential areas in

shorter and shorter timespans, the prophylactic aspect of this cooperation is at least as important as the remedial aspect.

3. An ethical decision cannot be termed good unless it considers the total and universal horizon of history. Since such complete contextualization of ethical decisions is possible only considering the proleptic anticipation of the goal of history in Jesus the Christ, humanity apart from Christ will always close itself off from part of the good. As the Pauline imperatives indicate, even Christians succumb to the temptation of reducing the universal good to their own good. They too can live as justified only by accepting God's forgiveness. All things considered, this means that our decision for what is good in technology is a decision made in trepidation. It is done in hope that we are doing the right thing and in the assumption that even with the application of modern technology we are not to save the world, or even spare it from destruction. Yet allowing for a total universal eschatological horizon and not closing ourselves off from it, we are able to contribute to a greater contextualization of technology and thereby we are in a position of better distinguishing between its good and evil features.

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