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Responsible Technology: The Challenge of Our Age

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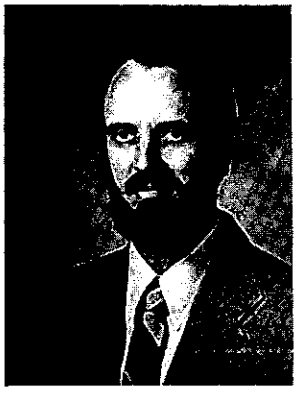

Calvin Jongsma joined Dordt's faculty in 1982 and is a member of the Mathematics and Computer Science Department. He received an M.A. in mathematics from Western Michigan University (1970) and a Ph.D. in mathematics and history of science from the University of Toronto (1983). His research interests lie in the areas of history and philosophy of mathematics and mathematical logic. His annotated **Bibliography of Christianity and Mathematics,** *coauthored with Gene Chase of Messiah College, was published by the Dordt College Press in 1983.*

In presenting a series of faculty papers on the topic of science and technology in these pages, the various authors have a two-fold intent. First of all, we wanted to raise communal awareness of certain trends related to contemporary technology; and secondly, we wanted to reflect upon our calling and responsibility in regard to these trends. Some papers, therefore, have analyzed the impact of developments in computer science, robotics, and technology in general upon such fields as industry, agriculture, the environment, and philosophical anthropology. These analyses not only pointed out what things were happening but attempted to evaluate them from a Christian point of view. Is it a good or a bad thing that computers are invading every aspect of our lives? Has increased technology destroyed our environment? Has it put the family farm in jeopardy? Will robots displace human beings and put us out of work in the future, whether we do blue-collar or white-collar work? In order to develop an adequate response to such issues, we outlined a Biblical framework in which to view science and technology, a reformed Christian world-and-life view with enough teeth to bite into the various problems.

In this paper I will not attempt to con-

tribute anything further to either of these two main aims. I will instead try to summarize what seems to me to be the key points that have emerged from the series. To be as succinct as possible, I will formulate my observations as thesis statements. As I understand it, these theses state the fundamental principles underlying a Christian approach to the topic.

1. **Technology, computer-based or otherwise, is in itself neither good nor evil.**

This thesis may seem commonplace, but it is sufficiently denied by various segments of contemporary society to require emphasis. Let's look at the two sides of this statement in turn, seeing what they mean and how they are denied.

On the one hand, technology is not intrinsically evil. God created the world good, having a certain technical potential which man has been able to analyze and cultivate for his own use and the greater glory of God. This potential was not destroyed through man's sin but remained present in creation because God continued to be faithful and uphold the universe, even while man rejected his Maker as sovereign Lord. Affirming the doctrine of creation, we therefore believe that nothing that man is able to construct, whether a machine or any other kind of man-made equipment or synthetic product, is evil *per se*. This point can be made in many different contexts. Technology should not automatically be made the scapegoat for our environmental crisis, the impending threat of nuclear war, rising unemployment, or the trend away from family-owned farms. The increasing technicalization of our life should not be taken as a sure sign of either decadence or dehumanization. Machines and the products of applied science and technology do what people design them to do, nothing more or less. Before laying the blame for an unhealthy state of affairs on technical developments, one must first examine the role and place of these developments in the various situations in which they function. There is a tendency among some parts of our society to long romantically for the past, when life was less complicated by technical apparatus and the quality of life was supposedly higher on account of that. But we ought not to fall into this extreme; it denies the cultural unfolding of God's creation, man's task in the world, given him already in the garden of Eden. Our response to the evil spawned by technological developments should not be to restrain or abandon technology, but to transform it, to redirect it so that it will serve the needs of humanity and of creation in general.

But if technology is not to be condemned for the ills of the world, neither is it to be extolled for the good in the world. I do not mean to be making the theological point that we are totally depraved and can do no good apart from Christ Jesus, not even with the help of technology—in fact, God sometimes uses evil people to accomplish his purposes and so do "good" in spite of themselves. What I rather mean is that our salvation must not be sought in the power of technology. But surely no one does such a

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thing, do they? People do not bow down to the computer or pray to a robot or put their trust in rockets or vaccines.

Or do they, without even realizing it? What exactly are the hidden motives deep down in our hearts, the spirits that drive us to adopt certain attitudes and take specific actions in life's many different situations? Is not our reliance upon atomic weaponry a grand-scale defection to Egypt for chariots and horses? Don't we really believe that a rosier future for human health is essentially dependent upon computer technology and the continued development of medical expert systems? Don't we look to technology and computers to solve the problems of the future, even when they have been instrumental in creating them in the first place? Is this idolizing technology or not?

When does the appropriate use of a good gift of the Lord become an idol separating us from the Lord? After the gift is cut off from its Giver, secularized, it may continue for quite some time to provide genuine benefits, but it may at the same time estrange us from our Maker. My generation, growing up in the 60's, at the time when the counter-culture of the far left flourished, was apt to dismiss technology as mostly evil. Such an attitude is no longer prevalent; many today find it rather silly and difficult to understand. But someone growing up in the 80's faces instead the opposite extreme, running the risk of capitulating to the camp which idolizes technology as the answer to all the problems of the world.

There is good reason for these two aberrations. Let me explain briefly. Technology gives us increased power, computer technology even increased power of a higher order, as has been stressed in the earlier papers. It extends our control over the rest of creation by enabling us to do things we never would have been able to do without it. It therefore gives us the ability both for greater obedience and greater disobedience. Depending on which aspect of technology is stressed, one can make a good case for technology being either the savior of humanity or its executioner. But both pictures are out of balance, the result of a lopsided view of the world. As civilization unfolds, we witness the rise of the demonic kingdom of man, but also that of the heavenly kingdom of God. Technology plays its part in both kingdoms, increasing the tempo of the struggle between good and evil, as it were, being itself neither good nor evil. To put it in other, more philosophical, words, technology is a matter of creational structure, while good and evil is a matter of the direction in which the structure is headed.

2. Technology is not religiously neutral.

This thesis complements and qualifies the first one. Though technology *per se* is neither good nor bad, all technology that is developed has the potential to be used for both good and evil. We of course never meet up with technology *per se*, only with technology as it is used. Technology does not exist in a vacuum; it is developed and used by people. As such, it exists in a context which gives it its meaning as service to God or service to an idol. One may well be able to say that a certain use of technology is good while another one is evil. For example, satellite technology may be used for telecommunications, for monitoring the weather, or other purposes which are basically good. Or it might be used at some time in the not-too-distant future to increase a nation's ability to wage war on other nations, something which is basically evil.

However, technological applications are often spiritually very complex. A given technological achievement may not be a clearcut case of either good or evil; or it may at the very least take a good deal of study to determine its intrinsic merits. Moreover, as my example makes clear, a technological development that might be assessed as basically good may later be found to have evil applications as well, or vice versa. This should perhaps make us a bit cautious about banning technological explorations in cer-

tain areas, such as nuclear energy or biological engineering, simply because the immediate application we and others perceive may not be thought to be salutary. One must of course always weigh priorities and consider the possible implications of a technological development, but the result may turn out quite different in the long run than was first anticipated.

It should be clear that in judging the value of a particular application of science or technology must take place in such a way that interpersonal relationships are not hindered, artistic growth is not stymied, uniformity of life style not promoted, and so on.

This thesis has a positive side to it, too. We ought to explore the use of technology to enhance the quality of living in a number of different dimensions. This need not depersonalize us, so long as technology is directed out of a proper spirit. The belief that

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technology, one is never dealing merely with technology. Technology is always embedded in a context or matrix. This leads me to my third thesis:

3. **Responsible technology, technology for the long-term good of the world, must always take into account all the various aspects of the situation involved.**

We are all probably familiar with narrow uses of technology, where one counts only the financial cost of introducing some new tool or method, treating all other factors as secondary. This approach has wreaked havoc on our environment, put people out of work without giving them something else to do, and so on. This is technology serving a false god instead of the true God. When people idolize one part of life, such as material wealth or economic prosperity, then technology is made to serve it at the expense of other aspects of life. A Christian approach to technology must recognize that no aspect of life should be predominant in all situations, that our lives consist of a rich variety of different activities, all of which are important. Implementation of technology must estrange us from one another and the "real" world is symptomatic of an acceptance of an erroneous view of technology, namely, that technology is basically evil or that it is necessarily tied up with a totalitarian approach to society. Quantified information, computers, and machines undoubtedly have the potential to enhance our world in ways we have yet to dream of. Perhaps they can help us to plan cities as places in which to live, not merely as places in which to shop and do business. Maybe they can help us to structure schools and academic instruction so that learning is positively encouraged, taking into account findings from the psychology of learning. We may be able to use modern technology to help us design homes which better fit into the natural environment surrounding them and which allow for both privacy and personal interaction within.

In these sorts of things, we are often too much concerned with the financial cost and not enough with the ethical, artistic, and emotional "costs," to mention just a few. We are all guilty of doing this; it shows how caught up we are in the materialistic frame of mind espoused by our North American

society. Our western culture and mindset are so geared toward financial realities that we are often babes when it comes to knowing how to structure our lives and the world around us so that we and others can develop in wholesome, multidimensional ways.

This third thesis highlights the importance of what goes under the rubric "liberal arts education." Dordt's general education requirement is in place not to keep students busy for a year and a half until they decide what they really want to do (though at times we act as if it were); it's there instead to help ensure that the scientists, engineers, teachers, musicians, and business administrators who leave this place do not attempt to address problems within their respective areas without realizing the significance of the larger human context. "External" factors should not be treated as secondary matters to be dealt with only after problems arise from following a narrow-minded approach, but as important aspects of situations to be considered from the outset in planning any course of action.

In connection with this thesis, let me reiterate a point made in an earlier paper. Integrated education, such as we hold up as our goal here at Dordt, is definitely not at odds with specialized knowledge. So-called "integrated learning" is sometimes only a smattering of this and that, a juxtaposition of trivia. But truly integrated learning is not superficial. In order to integrate knowledge there must be information and perspectives to tie together. Holistic education tackles large issues of concern to us all, but it does so by drawing upon the resources of many specialties, weaving together their diverse insights into a single, coherent picture. This is the wisdom we strive for at Dordt, knowledge which sees and has concern for the whole picture. Integrated education is not the denial of specialized studies, but their reason for existence, their culmination. If integrated education is done properly, it should equip the learners to live wholesome lives in today's world. For education is for life; it is not a collection of mental facts to recall in some moment of leisure, something to help you play Trivial Pursuit. Education is never only a matter of the head, of analysis and thought; it is ultimately a matter of the heart and hand, a matter of committed action.

I began this paper by noting that the purpose of this series of articles is largely educational. I've now further delimited the implications of this by pointing out that action invariably follows from education. What kind of action is an appropriate response to such a series of articles? This is an issue that should be considered further and in some depth. It is our belief that forming a correct viewpoint on the place of technology in our world will help us as we make decisions today and tomorrow concerning technological developments. Will a certain action affirm that technology is neither our salvation nor our doom? Does it square with our Christian vision of the world? Is it first of all done as service to God and to humanity, or is it done purely out of selfish or sinful motives? Does it positively promote the richness and variety that there is to life? Or does it close life down?

The main theses that I've outlined above and others which have been mentioned in the course of the series may not dictate precisely how we are to act in a particular situation that involves science and technology, but they do give us guidelines by which we can begin to evaluate the rightness of an action. They may not seem like earth-shattering principles to us, perhaps because we've grown up taking them for granted all our lives, but were we to try to convince the large conglomerates of the world that they should live them out, we would see just how radical they really are. In many instances they would overturn the *status quo* if they were to become the standard for action. It is our joint responsibility to strive for such a reformation of culture as an act of thankful obedience to God, whether or not it ever becomes a practical reality.