

# AP Computer Science Principles

## Summer Reading 2021

**Assignment:** Read the article below. Respond to one of the numbered prompts in a well-reasoned argument with examples from the past 12 months. Your response should be at least one page in length and written in MLA format with proper heading, header, in-text citations, and works cited page. You must have at least two in-text citations.

1. Technology not only frees us but enslaves us.
2. Idolatry of technology is manifested in the idea that the latest 'technological fix' will cure all our problems.
3. Technology is not neutral but embodies the worldview of the technologist.

## Towards a Christian View of Technology

Copyright: Attribution Non-commercial  
Steve Bishop

### *Towards a Christian View of Technology*

It is self-evident that we live in a technological society; and as Christians we need to take this fact seriously. Unfortunately, there is little evidence that we do: two recent evangelical dictionaries of theology failed to include articles on technology; few if any undergraduate theological courses examine the theology or ethics of technology; and seldom do we hear a sermon on 'technology'. Could the underlying assumptions be that 'technology as a tool is neutral' and that a distinctly Christian view of technology does not exist? This article will, I hope, go some way to undermine these two false assumptions. The introduction of information technology (AT 12) in the science National Curriculum, and technology as one of the seven foundation subjects, presents a fresh challenge to Christian teachers the opportunity to teach technology Christianly. The first step is to develop a Christian perspective on technology. It is of no use accusing it of being 'the hand tool of the devil' as, according to the Times Educational Supplement (6 October 1989), 1400 members of the Plymouth Brethren did when writing to the National Curriculum Council asking that their children be removed from lessons involving computers. Neither is it a Christian option to accept technology uncritically as, for example, Wilhelm E. Fudpucker S.J. does: 'For Christianity, at least, there is no opposition to modern technology. Far from being opposed, the two are intimately even mystically, intertwined ... Technology not only comes forth from Christianity, it takes us into Christianity in a new and fuller sense' [1]. I will begin to develop a third way by examining what we mean by technology.

### *Defining Technology*

Definitions are fraught with difficulty. None more so than 'technology'. Edward de Bonowrites: 'technology is an impression rather than a definition ... the closer you get to it the more it is not there' [2]. Technology is 'the practice, description, and terminology of any or all the applied sciences which have practical value and/or industrial use', or at least that is what Chamber's Dictionary of Science and Technology (1983) would have us believe. Such a definition is defective. It is defective because it is historically inaccurate and it is too utilitarian. Science has

not always been the driving force behind technology, indeed quite the reverse. Many scientific advances (for example, thermodynamics or nuclear physics) have been reliant on technological developments (for example, the steam engine or the high-energy accelerators). Professor Colin Russell points out that the relationship between science and technology is complex, but the idea of technology being indebted to science is a Victorian myth [3]. It is also too utilitarian; to be technology by this definition it must have value and/or use. the existence of useless technology invalidates the definition.

#### **Technology is more than a tool or a machine**

; its meaning is much broader than that. It is a human activity, it is central to being human and integral to civilization. If we understand it in this way then not only does it include tools and techniques but also organizational and cultural aspects [4].

#### ***Technology is central to being human***

; it is, according to the Dutch philosopher Egbert Schurmann, the activity 'by which people give form to nature for human ends, with the aid of tools' [5]. Technology is essential for us to fulfil God's commission in Genesis 1:27 to subdue and rule the creation; technology is integral to forming and shaping the creation; it is a uniquely human activity.

#### ***Technology is integral to civilization***

The need of it is implicit in Genesis 2:15. To work (abad) and serve (shamat) that this Garden can be shaped into a City (Rev. 21). Paul Marshall writes: 'We are called to a city, a shaped environment and so we cannot reject technology or technological development, for it is an essential part of what God has set us to do on the earth'[6]. Technology is an important aspect of God's creation and as such it is good. Mark Roque speculates that the first use of technology in the scriptures is when Eve takes a branch, bends it and uses it to reach some fruit on a nearby tree [7].

#### ***Technology has become tainted by the Fall***

. After the Fall there is an escalation in `progress and the development of technology: Cain, the first murderer, builds the first city (Gen. 4:17), musical instruments are designed, built and played (Gen. 4:21) and metal forging and working is developed. But, hand in hand with development comes the escalation of potential destruction: there is a dark sinister side to technology (see the Song of Lamech [Gen. 4:23-4]). Technological development means that destruction is all the more advanced. Technology is the means whereby we shape the world, as is evidenced by the terms Stone Age, Bronze Age and Iron Age - a new technological discovery shapes the culture. .Technology also begins to shape us; so much so that by discovering an ancient tool the skilled archaeologist can extrapolate much about the culture and the ways of the people that used it [8]. Despite its dark side technology is not taboo, it still has the potential for good. God even commands Noah to make use of technology in boat building to save Noah and his family from the coming judgement, and Jesus would necessarily have made use of it in his carpentry. .Technology has two sides: for every Ark there is a Tower of Babel [9]. It not only frees us but also enslaves us. The word processor brings more time and freedom to an author and secretary, but it brings boredom and tedium to the factory workers who produce them-and very often at wages and in conditions that are tantamount to slavery. Before the Fall technology is seen as aiding humanity in developing and shaping the creation, post-Fall we see that technology now has a potential not only for good but also for evil: it can form and deform the creation. It has also become idolized.

#### ***Technology as an Idol: Living Technology?***

Technology not only forms idols (Isa. 44:12) it also has become an idol [10]. By saying that technology has become an idol, I don't mean that we have fashioned technological

artefacts, placed them on our mantelpieces and bow down to them daily. Contemporary idolatry is more subtle. An idol is not necessarily a graven image, or even an image at all, it is an aspect of creation that is given a place of honor that God did not intend it to have. Idolatry is putting trust in an aspect of creation rather than in the Creator [11]. The latest technology becomes the source of security, and then it becomes a savior. The way our society is described as 'technological' is a direct consequence of our idolatry of technology-what we worship we become like. Idolatry of technology is also manifested in the idea that the latest 'technological fix' will cure all our problems. Contemporary adverts provide us with plenty of evidence that our society has formed technology into an idol.

It is the difference between poverty and prosperity: 'Giving your business a technological edge in the quickening pace of the world's markets could be the difference between failure and success' (AEA Technology). 'Companies ... depend on leading edge technology to keep them head and shoulders above the competition' (NCR Computers). It brings 'supernatural' powers: 'Hoover technology has given it [a vacuum cleaner] Extra Sensory Powers. 'Leading edge' technology, technology 'without frontiers' (Fiat cars), 'all the power of the latest' technology (a Clairol hairdryer!) are all called upon by manufacturers to help their products sell. Ian A. Harvey, chief executive of the British Technology Group, in *Prospect* summarizes the popular view of the idol of technology: 'The world is constantly changing rapidly. One of the principal motors of these changes is technology. Companies which do not develop or acquire the right technology will be left behind' [12]. Technology has almost become omnipotent, nothing can hold it back: 'Technology, like death and taxes, is inevitable ... it marches on' and 'at some point it assumes a life of its own' [13]. It has, according to the Creda advert, become 'Living Technology'.

### *Technology and World View*

Realize it or not, we all have a world view. Our world view determines the way we perceive the world; it is the pair of goggles through which we view reality. It is shaped by several questions [14]:

1. Who am I?
2. What is it to be human?
3. What is reality?
4. Where am I going?
5. What is wrong with the world?
6. How can it be remedied?

The answers to these questions are based on faith commitments, so we are all, whether Christian, Moslem or atheist, religious creatures. These faith commitments shape the way we think and act. Consequently, our world view is manifested in all of our activity [15].

### *Technology embodies the world view of the technologist*

. By examining how two different world views, humanism and deep ecology, answer the faith question 'What is it to be human?', we shall see how it directly affects the role of technology. Humanism is an anthropocentric philosophy; it sees humanity as the center and focus of everything. Humanity is the controller of the mechanistic universe that is called nature. We are above nature. Technology, then, becomes a tool to conquer and dominate nature, it is the means whereby we progress, it provides a gateway to a golden age.

Deep ecology, a radical green world view [16], on the other hand, views humanity as an integral part of the living organism of nature; it is a bio-centric philosophy. Hence technology is treated

with suspicion-it is something that is to be controlled, because it epitomizes humanity's destruction of nature.

### ***The Myth of Neutrality***

Scientists, technologists and politicians usually claim that technology is 'neutral'. They argue something along these lines: 'Technology is a tool, a benign instrument; there is nothing inherently good or bad about it. Its use is determined by the user; therefore, technology is not to blame for its misuse.' Neutral technology is a myth [17], as the following points show.1.

*To regard technology as neutral is to give technologists a carte blanche*

. To declare technology 'neutral' is tantamount to a refusal to face up to the issues that technology confronts us with. It is allowing scientists and technologists a free-rein to do what they want-if it is neutral why bother restricting their endeavours?2.

### ***It is impossible to separate technology from culture and society***

. According to Ian Reinecke a test of technology's neutrality is 'whether its design is unaffected by the society around it'[18]. If technology is neutral then it should be culture-independent. This is clearly not the case. One technological artefact, the fax machine, illustrates this point. A fax machine presupposes certain things: electricity, telephone lines, the need/desire to communicate rapidly, the ability to read and write, other fax machines, . . . It embodies and reinforces the characteristics of the society that produced it. Place the same fax machine in the hands of an Amish community in the U.S.A. and it immediately becomes apparent that the fax machine is value-laden. Commenting on a similar example Michael Shallis concludes:.. to accept a washing machine is to accept a specific way of life, a specific attitude to nature, a specific attitude to [humanity's] place in the world' [19].3.

### ***Technology has an ethical aspect***

. It is the development of new technologies that bring issues of life and death into sharper focus: euthanasia, abortion, embryo research, contraception, genetic engineering and population control all owe their origin to the development of technology. Biotechnology, the technique of using living organisms in industrial and agricultural processes, provides a somber example of the ethical dimension of technology. Biotech could cause the collapse of many Two-Thirds Worlds country economies. Coffee, cocoa and vanilla are important Two-Thirds Worlds exports, and many countries' economies are dependent on them. Yet if biotech research is successful they could produce these products cheaply in a laboratory and wipe out the need to import from the Two-Thirds World. Who pays the money, plays the tune.4

### ***Technology is laden with the values of the technologist's world view***

. One illustration should be sufficient to illustrate this point [20]. The bridges in Park Island, New York, are high enough to let cars go under but too low for twelve-foot high buses. It is the middleclass whites who travel in cars and poorer blacks in the buses.. .5.

### ***It is a human activity to be done under the Lordship of Christ***

Technology is not merely a tool or artefact but is a human activity. It is therefore an activity which is part of God's good creation, it is therefore not intrinsically evil-but neither can it be intrinsically neutral, because it must be done either obediently or disobediently-there is no neutral ground in God's kingdom.

### **Conclusion**

Technology is a non-neutral aspect of God's good creation which has become corrupted by the Fall. A Christian response cannot wholeheartedly embrace it or unreservedly reject it; rather we must redeem it. This means exposing the value-laden world views that lie behind it, unmasking it as an idol and dethroning it by bringing technological activity under the Lordship of Christ. Technology has a vital role in the creation order as an activity that helps us steward and develop,

rather than express mastery over and exploit the earth. The challenge that faces us as Christians and educators is to demonstrate the responsible use of technology in the classroom and in the curriculum.

## References

- [1] In *Theology and Technology, Essays in Christian Analysis and Exegesis* (edited by Carl Mitcham and Jim Groote) (University Press of America, 1984).
- [2] E. De Bono *Technology Today* (RKP, 1971) cited in Andrew Clegg 'Hunting down technology in schools' *School Science Review* vol. 69 no. 246 (September 1977) p. 34.
- [3] Colin A. Russell, *Cross-Currents: Interactions between science and faith* (IVP, 1985) p.104.
- [4] Arnold Pacey *The Culture of Technology* (Backwell, 1983) pp. 4-7.
- [5] Egbert Schuurman, *Technology and the Future* (Wedge, 1983) p. 5
- [6] Paul Marshall 'Modern technology: idol or divine gift?' *Evangelical Review of Theology* vol. 10 (July 1986) p. 261.
- [7] Mark Roques, *Curriculum Unmasked: towards a Christian understanding of education* (Monarch/CIE, 1989) p. 35.
- [8] *Ibid* p. 264.
- [9] Stephen Monsma (editor), *Responsible Technology* (Eerdmans, 1986)
- [10] See Marshall op. cit. pp. 258-65; also the discussion of 'technicism' in Monsma (ed.) op.cit. pp. 49ff.; and Michael Shallis *The Silicon Idol* (Oxford University Press, 1985) ch. 11.
- [11] For an excellent discussion of contemporary idolatry see Bob Goudzwaard *Idols of Our Time* (IVP, 1987)
- [12] Issue number 1 (Winter 1987-88) p. i.
- [13] Donal Christensen 'Technology in the public domain' *Spectrum* vol. 24 (November 1987) p. 23
- [14] Brian J. Walsh and J. Richard, *Middleton The Transforming Vision*, (IVP, 1984).
- [15] See Mark Roques, op. cit . for a penetrating critique of the way in which world views are manifested through school textbooks.
- [16] For a critique of deep ecology see my 'Green theology and deep ecology: new age or new creation?' *Themelios*, 16,(1990-91).
- [17] There is a vast amount of literature on neutrality and technology: see e.g., Monsma (ed.) op. cit., ch. 3; 'Is technology "neutral"?' in J. Zerzan and Alice Cairns (ed.) *Questioning Technology: A Critical Anthology*, (Freedom Press, 1988) ch. 10; Arnold Pacey op. cit.,; Jerry Mander *Four Arguments for the Elimination of Television* (William Morrow, 1978)
- [18] Cited in *Questioning Technology*, p. 214
- [19] *Silicon Idol*, p. 95.
- [20] I have 'borrowed' this illustration from David Lyon's excellent book *Silicon Society*, (Lion, 1985).