

## **Structures for imperfect life**

### **The development of ‘evil-proof’ technologies**

Marc J. de Vries

Delft University of Technology

the Netherlands

[m.j.devries@tudelft.nl](mailto:m.j.devries@tudelft.nl)

Abstract

(100 words)

## **0. Introduction**

In this book the metaphor of the garden is used to indicate that the reality in which we live is something God cares about and in which we have a calling to care for it also. The term 'garden' in this context reminds immediately of the 'Garden of Eden'. In this chapter I want to show, however, that the garden we are dealing with is not that perfect garden. We are not living in Eden anymore, but in an imperfect garden, in which we as caretakers are also imperfect. Therefore in seeking structures for life, we have to realize that this life is an imperfect life, and that we should include that notion in our considerations about how to deal with technology in our current society.

In his valedictory address 'The Challenge of Islam's Critique of Technology', Egbert Schuurman shows how both Islamic and Christian scholars have made critical analyses of technological developments in western industrialized society and culture. Therefore the Islamic critique ought to differentiate between decadence that is caused by secular thinking in the western world and the role of the Christian religion. In this paper I want to show that the Christian critique of technology has a special dimension that secular critique does not have and that also can be used against secular thinkers who have argued that it was Christian religion in particular that caused the problems of technological developments in western culture. I also want to show the alternative route that this view can offer for a responsible development of technology, in which the notions of judgment and imperfection are taken into account. But first I will show how the critique made by phenomenologists and neo-Marxists, as well as the critique on Christianity as the cause of

the development of technology by an often-quoted non-Islamic author, David Noble, fall short.

### **1. A critical response to technological developments**

Schuurman's main point of critique is that in the western world secular thinking had led to a loss of real meaning, accompanied by a domination of the ideal of mastery and control. Rather than obeying God's will over us and thus fulfilling the real meaning of life, humans have chosen to be autonomous rulers over creation. Schuurman also mentions Heidegger as a critical philosopher with whom several Islamic scholars have agreed in their critique<sup>1</sup>. Heidegger was not a Christian philosopher, but some Christian philosophers have taken up his ideas and continued thinking in his trace. One of them is the American philosopher Albert Borgmann<sup>2</sup>. He has particularly expanded the idea of alienation through technology. He uses the term 'device paradigm' to show that devices have become such powerful tools to provide certain commodities that they have loosened our direct contact with reality. We no longer experience the direct contact with our surrounding by going into the wood, chopping trees to get fuel for heating our homes, but with a tiny movement we adjust the thermostat and the temperature almost immediately rises. Borgmann's therapy is what he calls 'focal activities': activities that bring back physical effort and a more direct contact with reality. In Borgmann's extension of Heidegger's thinking, the limitations of this approach become even more evident than in Heidegger's writings. It is only our personal experience with reality that determines the quality of life and the role of technology in this. But enriching personal experience is too

poor a solution to the problems we face today. The Internet seems to fulfill that function increasingly, in spite of philosophers' efforts (e.g. by Hubert Dreyfus) to show that the lack of a bodily experience puts a serious limit to this experience. So phenomenology seems to fall short in offering a real alternative. Others, like Andrew Feenberg, have chosen the path of neo-Marxism and focus on the social rather than the personal dimension<sup>3</sup>. Feenberg argues that technological developments should be realized in two phases, one of primary instrumentalization in which a social problem is decontextualized and treated as a technical problem for which a solution is designed, and a phase of secondary instrumentalization in which the solution is decontextualized and in which users can sometimes completely redefine the solution according to the social power structure at hand. This approach, too, has serious limitations, as what the currently dominant social powers want is not necessarily a good solution. Both approaches suffer from the fact that criteria for good technological developments come from 'inside', either from individuals or from social organizations. Therefore a more fundamental shift in thinking is needed, as Schuurman also argues<sup>4</sup>. But several secular scholars deny that Christianity can provide an alternative way, because religion itself is the cause of problems. Before I can show the route suggested by Christian faith, I first have to argue against this.

## **2. A false image of the role of religion: the strive for perfection**

Schuurman mentions that there is a heightened interest in religions because people acknowledge that they can bring to our attention neglected fundamental questions. But

the interest for religions has also brought scholars to the accusation of religion as the main cause of problems. Lynn White has done this for the environmental problems that are caused by technological developments. He argued that its anthropocentric nature caused the idea that it is God's will that humans exploit nature. There is a moment of truth in his critique in that Christians indeed have cooperated in the exploitation of nature, thereby forgetting that God's command to rule over nature was regulated and limited by the command to care for it. But the Christian 'dogma' (the term that White uses) does not contain the unlimited exploitation that White accuses Christianity for.

More fundamental is David Noble's view on religion as the driving force behind technological developments in the western world<sup>5</sup>. According to him it is in particular the religious ideal of perfection that not only gave non-religious people a motive for developing an overheated technology, but also motivated Christians and other religious groups themselves to develop technology to an unlimited extent. In his book *The Religion of Technology* he argues this both from a historical and a systematic perspective.

However, as far as Christianity is concerned (and most of his examples deal with that<sup>6</sup>), his argumentation is seriously flawed by his selection of examples. Rather than quoting authors in mainstream Christianity, he uses sects and subcultures to provide evidence for his view. The result is that he has not captured the essence of mainstream Christianity that puts emphasis on the fact that after the fall of humans in paradise, realizing the ideal world is no longer possible for us. Let me further elaborate that to show how the very same religious perspective can help to avoid the pitfall of an overzealous strive for perfection that Noble ascribes to religion, and in particular to Christianity and that has also impacted non-religious technologists.

In Genesis 3 we read that Adam and Eva failed to obey God's command not to eat from the forbidden fruit. The result is that they are driven out of Eden and that God announces that from now on their labor will be met with resistance by the created reality. The earth will bring forth thorns and thistles. God does not withdraw his command to dress and keep the created world. Humans are still called to disclose the sense that God had laid in the created world. But contrary to the original situation, before the fall, the earth is now under the curse of God for the sake of human's transgression. The bringing forth of thorns and thistles that is mentioned is not merely a natural cause-effect relationship. More is at stake here. It is the result of God's sentence over sin. The very same can be observed in the final book in the Bible, Revelation. In chapters 6 and 8 we read about the disasters that strike the earth. In the first place it is striking how much they resemble the environmental problems that we currently face. In the second place we can see that they, too, are not described as the result of natural cause-effect relations, but as God's judgments. This does not mean that cause-effect relations play no role here at all, but definitely more is at stake<sup>7</sup>.

There is a striking contrast with an Islamic view on imperfection here. According to Islam, imperfection was in creation from the very beginning, because only God is perfect and he did not want humans to be his competitors. Therefore humans were imperfect in that they did not have the same knowledge and capabilities as God had. But there was also imperfection given with creation in that humans from the beginning were influenced by good and evil influences and considerations. It was the task of humans to fight the bad

and strive for the good. Sin is making the wrong decisions in this dilemma between good and bad. Perfection only exists in God's nature, not in human nature. Islam does not recognize the concept of original sin, as it is in Christianity. In that perspective, imperfection does not have a negative connotation and is not related to the nature of humans.

The same book of Revelation, but also several other places in the Bible, makes clear that it is only through God's final intervention that a new state of perfection will be realized<sup>8</sup>. No human effort can add to that. It is only by ignoring the deep effects of sin and judgment that certain religious movements can claim that human efforts should be directed towards bringing back the perfect world. These are particularly the movements that Noble draws from, but they can not be claimed to be mainstream Christianity. Mainstream Christianity has always acknowledged the fact that all our human efforts can not undo the brokenness and imperfection of the created reality that is present until the day of Christ's return. This imperfection appears in several ways. In the first place the knowledge humans have about reality on the basis of which they have to respond to God's call to develop cultural activities, is not only limited because humans do not have God's omniscience, but it is also distorted by sin. We tend to claim 'knowledge' about what in fact we wish to be true because it fits (sinful) needs rather than being aimed at finding truth. In the second place, we work from the wrong motives in our cultural labor. As Schuurman has indicated, we seek to dominate and control rather than to love and to serve<sup>9</sup>. The desire to dominate and control can be taken to its limits when humans strive for perfection. In fact what we aim at is making God's judgment over sin undone, not by

the work of Christ who came to carry away sin and judgment for us (in a Christian perspective), but by his/her own efforts. In the transhumanist movement this struggle for perfection even includes the immortality that according to the Bible humans were denied by God in Paradise after the fall<sup>10</sup>. It is as if these transhumanists try to order the guardian angel at the gate of Eden<sup>11</sup> to step aside and let men take the fruit of the tree of life on his own account. This very much resembles the effort of humans to build a tower in the plain of Shinar (the tower of Babel, as we usually call it<sup>12</sup>).

### **3. Towards structures for imperfect life**

What should be our response to this? What is a fruitful way forward? How can we at the same time respond to God's call to cultivate His created world, and yet avoid the pitfall of trying to undo God's judgment as the result of our fall? This may seem like a very difficult question, but in fact any experienced engineer knows the answer by experience. Such an engineer knows that his effort should not be aimed at realizing the perfect product, but to find the right trade-offs<sup>13</sup>. Most of what engineers do is in fact about finding the right balance between what is desirable from a perfectionist point of view and what is feasible for a practical point of view. Denying the latter is perhaps the most serious obstruction for the former. Rather than ignoring the imperfection of reality, the engineer knows that one should deal with it. The question is not: how can I make the product perfect? The question is: what imperfections still allow for an acceptable situation in which humans can safely and comfortably live and experience the sense of reality in spite of its brokenness. I can phrase this in the terminology of reformational

philosophy as follows<sup>14</sup>. An engineer has to study the product from as many different angles of view as there are aspects of reality: the physical, the biological, the psychological, the social, the economic, the legal, the aesthetical, the ethical and the belief or trust aspect, to mention a few only. In each of these aspects laws govern the behavior of the product. The physical laws govern its physical behavior, the economic laws determine if the product will be acceptable economically, the psychological laws determine if the user can work with the product, etcetera. Thus each of the aspects contributes to the list of requirements. Every engineer knows that it is impossible to find one design that matches all the requirements emanating from the whole spectrum of aspects. What (s)he does is trying to find trade-offs that allow for the most crucial requirements to be met and for as many as possible of the others to be (partially) met<sup>15</sup>. In this impossibility there is something of our human nature. We are not as God, but limited in our knowledge and capabilities. But there is also something of the effect of sin because of which reality does not any more allow for perfect solutions because of God's judgment. The engineer will also have to recognize the imperfection as the effect of sin in that humans do always not think and act according to God's will. Therefore the engineer will have to design the product with in mind not only what happens if a (morally) good user gets it, but also what can happen if a (morally) bad user will get it. In other words, one of the considerations should be: how much (technological) power do we want to put in sinful human hands? Also in our knowledge, sin can result in imperfections, because we may want to hold for true what we would like to be true even when we suspect that the actual truth might be different. So the engineer has to reckon both with imperfections that are given with our original human nature (being less than God already before we fall into

sin) and with imperfections that are the result of our sinful thoughts and deeds. There may even appear to be a need for technologies that are explicitly aimed at reducing the effects of sin, and not to fulfill a human need. One could think of technologies for identifying and punishing criminals. In the metaphor of the garden one could call this the technologies for removing the weeds.

Although this may seem like common sense, it requires a ‘paradigm shift’ in a similar way as Schuurman indicates on page 14 of his valedictory address. Kuhn in his writings on paradigms uses the term ‘incommensurability’ between paradigms to indicate that often terms may seem the same in different paradigms, but the paradigms are so fundamentally different that the terms need to be redefined. An example of this for the paradigm shift we discuss here is the term ‘sustainability’. In the Brundland report<sup>16</sup> it is defined as follows: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Literally taken, this suggests a perspective of eternity because it poses that each next generation will have all the recourses they need to meet their needs, of which survival of course will be the most basic one. Therefore we have here a utopian view of immortality, not unlike that of the transhumanists. Even though most people will not it that literally, this definition does contain that notion. In a perspective in which sin and judgment are acknowledged the term sustainability therefore needs redefinition. We have to acknowledge that as a result of God’s judgments (see the chapters 6 and 8 in Revelation) the quality of the environment will deteriorate in spite of our efforts to stop this and therefore in the end reaches a level where not all needs can be met anymore. The question

therefore should not be: how can we undo this process of deterioration, but how to use the natural resources in such a way that a responsible trade-off is found between preserving as much as possible and yet using what is really needed (and not just for luxury). Such a perspective does justice to the reality of God's judgments and yet aims at obeying his call to cultivate the created reality.

In this perspective we will also acknowledge the laws that God has laid in reality rather than ignoring them. Today we can see efforts to avoid the laws of creation particularly in virtual realities. In such artificial environments the ideal often is (or perhaps was, because the difficulties of that have already become evident) to 'turn off' laws that limit our possibilities to realize perfection simply by reprogramming the simulation. I can change my character if I do not like the current one by redefining my avatar. In principle all actions with negative effects can be made undone by resetting the program. All this is not possible in reality outside this virtual environment and that probably explains at least part of its popularity. It also explains the psychological problems that have already emerged when people find out that at least part of their life has to be outside the virtual, Second life<sup>17</sup>. The virtual world is as real as the rest of the world in that it is my real mind that gets involved and therefore can not leave behind its nature and is still subject to the laws of reality. How complicated the relation between the real and the virtual can be is clear from the difficulties that were met when people tried to apply the normal, 'real' legal system to crimes committed in Second Life. It was by no means evident how the laws of reality applied to the virtual world of Second Life. Yet, here too, in the end ways were found to apply laws to this new domain, which shows that the ideal of having a world in

which the laws of reality do not apply was not realistic. Even in a virtual reality, it is unavoidable that we have to learn to live with imperfection because this is the necessary result of human fall in paradise. In a Christian perspective, only the new life in Christ can bring the perfection, but not until his return to earth. Until then we have to seek acceptable trade-offs as beings that are responsible to God. We have to seek responsible structures for life, not a perfect life, but an imperfect one.

#### 4. References

- Borgmann, Albert (1984), *Technology and the character of contemporary life: a philosophical inquiry*. Chicago: University of Chicago Press.
- Dosi, G. (1982), Technological paradigms and technological trajectories, *Science Policy*, Vol. 11, 147-162.
- Feenberg, Andrew (1999), *Questioning technology*. London: Routledge.
- Fukuyama, F. (2004), Transhumanism, *Foreign Policy*, No. 144, 42-43.
- Noble, David (1999), *The religion of technology. The divinity of men and the spirit of invention*. New York: Penguin Books.
- Schuurman, Egbert (2007), *The Challenge of Islam's Critique of Technology*. Valedictory address at the University of Wageningen, September 20, 2007.
- Turkle, Sherry (1995), *Life on the Screen: Identity in the Age of the Internet*. New York: Simon and Schuster.
- Vries, Marc J. de (2005), *Teaching About Technology. An Introduction to the Philosophy of Technology for Non-Philosophers*. Dordrecht: Springer.
- Vries, M.J. de (2009), "The translation of user requirements into technical specifications, in: Meijers, A.W.M. (Ed.), *Handbook for the Philosophy of Technology and Engineering Sciences*, Ch. III.4. Amsterdam: Elsevier.
- White, Lynn Townsend Jr (1967), "The Historical Roots of Our Ecologic Crisis", *Science*, Vol 155 (Number 3767), March 10, pp 1203–1207.
- World Commission on Environment and Development (1987), *Our Common Future, Report of the World Commission on Environment and Development*. Published as Annex

to General Assembly document A/42/427, Development and International Co-operation:  
Environment August 2, 1987.

## Footnotes

---

<sup>1</sup> Schuurman, p. 7.

<sup>2</sup> Borgmann 1984.

<sup>3</sup> Feenberg 1999.

<sup>4</sup> Schuurman, p. 8.

<sup>5</sup> Noble 1999.

<sup>6</sup> In his chapter on space travel, for instances, he focuses on the Christians working in NASA and also when he discusses Von Braun he claims that the religious foundations for his motivation was explicitly Christian (Nobel 1999 p. 127). Likewise in other chapters he starts by focusing on the Christians themselves and then moves to non-Christians that have been impacted by the religious zeal for perfection.

<sup>7</sup> On page 11 of his valedictory address, Schuurman refers to Iqbal and his view that harmony, justice, equality, solidarity and care should be reflected in human society, but he does not mention if Iqbal, or others, also acknowledges the impact of sin on this.

<sup>8</sup> It should also be noted that before Christ's return, God can even use the suffering and problems that we face as a result of His judgment for the better. In this paper I will not elaborate that any further.

<sup>9</sup> Schuurman, p. 8/9.

<sup>10</sup> Francis Fukuyama presented a critique on the values held by transhumanism in an article in *Foreign Policy*. According to him the notion of mortality plays a vital role in our being human.

<sup>11</sup> See the description in Genesis 3.

<sup>12</sup> Genesis 11.

---

<sup>13</sup> See for instance Dosi, G. (1982) and De Vries (2009).

<sup>14</sup> See also my book *Teaching About Technology*, chapter 2.

<sup>15</sup> Here I differ from Andrew Basden who in his presentation of reformational philosophy defines the 'shalom principle' as the fit of the product with all aspect laws. See <http://www.dooy.salford.ac.uk/shalom.html>.

<sup>16</sup> World Commission on Environment and Development (1987).

<sup>17</sup> Turkle 1995 believes in a therapeutic value of virtual realities in case of psychic problems, but also noted that the same medium can be seen by patients as a way to escape the problems they face in real life.