In recent decades, research in the area of religion and science has produced numerous exciting and insightful works. The topic of engineering as applied science has, however, been somewhat neglected. Theologians have written much in the area of technology assessment, but how are we supposed to deal with the explosion of technological novelties that have come into our midst so rapidly and unexpectedly: nano-technology, gene-technology, cloning, robotics, hybrid cars, the Internet, cell phones, digital cameras and the iPod, to name just a few? Adding to our fears is the fact that our children and students have integrated these technologies seamlessly into their lives and leave us sometimes breathless watching them using these technologies so effortlessly. In order to find a path through the labyrinth of new developments, it is helpful to look at these technologies using two criteria: will these technologies change religious practice or will they challenge the theological understanding of humankind? If so, we want to take a closer look. If not, we can decide to ignore them or learn to use them as much as we feel comfortable.

Let’s have a look at the one technology that has already changed religious practice. Many people today practice their faith online in cyberspace. So-called “cyber churches” have a few advantages over traditional parishes; most of them are independent from time and space and people can find easily communities of like-minded people; people who don’t like the smell of incense can practice mass without it; people who don’t like long-winded liturgies can find services to their liking and take part in them only as long as they want since no dirty looks will follow them on their early way out; people who find their local minister too simple-minded can find theologically sophisticated sermons online; people who can only sleep in on Sunday mornings can attend church on Monday or Tuesday; people who find the organ boring can listen to spirited percussion-accompanied gospel choirs. But there is one way in which every parish supersedes even the liveliest cyber church: it presents a real, physical community in real time and shared space. We humans are bodies acting in a world and research has shown that cyber relationships do not even come close to the depth of experience a physical community can give. Instead of seeing the advantages of online communities as a threat, we should take

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them as a challenge because they address some valuable critical points. In a highly flexible, multi-cultural, media-savvy society, we have to reconfigure traditional ways of practicing our faith and become inspired by the new ways of Mass presented on the Internet. Cyber churches challenge us in a good way to modify several dear traditions and adapt to a new culture.

There are several technologies that challenge the theological understandings of humans as God’s image and, thus, as beings with dignity and intrinsic worth. For many critics, cloning has reduced humans to mere gene-processing engines that can be copied and rebuilt as desired. But is this perspective on cloning really correct? If we think that cloning reduces us to gene machines, we give cloning too much power over our self-understanding. I think that there is another, more theoretically sophisticated way to look at this technology. The discovery that humans share nearly ninety-nine percent of genes with chimps and nearly fifty percent with yeast brings us back to the biblical insight that humans are an intricate part of creation; this discovery ought to make us modest as it clearly tells us to what extent we are like all animals. The many environmental catastrophes envisioned by ecologists clearly show that human hubris with regard to the rest of God’s creation has caused perhaps irreversible harm. In cloning I see a chance for us to regain the biblical wisdom that we, like all other animals, depend on God-given food and water and air, and might motivate us to finally protect this planet that has been given to us.

The universal presence of computers in our lives has made us dependent not just on electricity but on information processing. The speed and capability of computers often makes us think of ourselves as a kind of machine with inferior processing power. Metaphorically, we use expressions such as “I couldn’t store it” that do not just compare our brain to a chip, but also indicate the superiority of a computer to our brain-power. However, while computer scientists have to work from the assumption that a digital computer can “think” and therefore be programmed to do just what people are capable of doing, this assumption is rarely taken as ontological statement. While some scientists without philosophical training use the metaphor of humans as “meat machines” as ontological description of who we are, most are comfortable with an understanding of humankind that allows for a pragmatic reductionism but is not lived outside of the lab. If we perceive ourselves as computers, it is more due to the fact that we don’t understand them and are in awe of them. But, really, current computers are very simple and even the brain of an ant is more complex than they are. This leads to another theological insight. Working with computers makes our respect for creation grow as even the most sophisticated machines are so much dumber than even what we perceive as a “primitive” insect.

Robots are often perceived as another threat to our humanity. These machines will increasingly share our space and might even become more humanlike not just with regard to their looks but also with regard to their intelligence. While such a development is probably decades away, it is at least feasible to happen in our children and grandchildren’s lifetime. The Jewish tradition has long perceived the act of robot building as prayer because it is an act of celebrating God’s creative powers in us. I see in robots not a threat, but a potential partner species with whom we have to learn to interact. If we look at the current world situation, we see so much hatred and prejudice that leads to the rejection and death of our fellow human beings. We humans are not very good in accepting people who are different from us as equal in value. If robots are
around the corner, this might give us the chance to rethink our relationship with other humans by using the robots as thinking tools. Further, we see how willing children are to interact with robotic devices and how little prejudice they have towards people who look and think differently. Jesus already observed that this childlike attitude is very healthy and enviable. Perhaps we can learn from that to modify our behaviors in the global community.

An article that takes a much more negative view on technology is Bill Joy’s “Why the Future Doesn’t Need Us?” You can find it on the website of Wired magazine (http://www.wired.com/wired/archive/8.04/joy.html) as well as related discussions that argue much more competently than I ever could against Joy’s main argument.

With regard to our interaction with computers and TV, I can highly recommend Byron Reeve’s and Cliff Nass’s The Media Equation, in which they argue that humans anthropomorphize these machines due to the way our brains work. Their very entertaining experiments help to rethink the way we understand the power of these media in our lives. My own book, God in the Machine: What Robots Teach Us about Humanity and God, analyzes new developments in robot technology and argues that they will help us to become more tolerant to one another.

I do not think that other technologies provide a comparable challenge to theology even though they might change our daily routines, advance our sensing powers, or lead to medical progress. Therefore, I concentrated on these few examples.