Technology and Ethics   *16ᵗʰ October*   *Professor Morna Hooker*

My total lack of qualifications to speak on the theme of technology was confirmed for me last week, when the chaplain spoke, *in absentia*, about smart phones. I do not possess a smart phone. Some of you may well wonder how I manage to exist without one, but apart from the fact that I am unable to download Apps, and so miss out on money-saving offers from the supermarkets and the ability to switch my central heating on and off remotely, I manage quite well. I do have a *mobile* phone – useful not only for doing what phones were designed to do (i.e. make phone calls in an emergency), but for receiving text messages from my bank – but I cannot access the internet on it, and I have spent little more than £20 on calls in all the years I have had it. It is *not* a big part of my life.

But the latest version of the i-phone is merely one advanced example of what technology can produce. 'Technology' probably conjures up in our minds something complicated, fully comprehensible only to the highly-skilled: not just i-phones and computers but complex machinery in our factories and space rockets. But according to our dictionaries, the word basically means simply the science of the application of knowledge to practical purposes: it comes from two Greek words meaning 'study' and 'skill'. Wandering through the 'prehistoric' section of a museum recently, I paused to admire the flints that had been fashioned into knives, scrapers and arrows; here was skill applied for a very practical purpose – hunting and preparing food; prehistoric people had applied their minds to a problem: how do we kill an animal in order to eat it? And in the next case I saw how they had used fire to cook it, and produced cauldrons and bowls in which to cook and eat it.   And there were querns, too, on which to grind wheat and other grasses to make bread. Here was an exhibit that made me realize that I did know *something* about technology, since I have had a lifelong passionate interest in windmills, even if I do not fully comprehend the technical discussions between millwrights about the best angle at which the ends of the windmill sails should be inclined or the best ratio in the number of cogs on the various interlocking wheels. As I moved through the museum, the goods became more and more complex as the technology advanced. 'Technology' covers not only the latest use of a silicone chip, but the basic skills which allow us to exist – bringing our minds to bear on how to fix something. Even I apparently use technology, since I am quite good at finding practical solutions to problems that arise in my house and garden.

Of course the basic difference between early people making their flint tools and modern people using i-phones is that the former knew just what they were doing, working out the angle at which they had to strike the flint, while the latter, by and large, have no idea how their phones work. No matter, you may think, provided that someone understands how they function, since I can simply ring their help-line if I meet a problem. But that 'provided that' is important. What if nobody understands?

The older ones among you will remember that our University e-mail used to run on something called 'Hermes', but a couple of years we were weaned off that onto Outlook. I had got used to Hermes over the years, and didn't really like Outlook, so I enquired why this change was being forced on us. The answer was that the people who had set up Hermes had all retired, and nobody understood how it worked anymore. I suppose we could have gone on using it, but what would happen if something went wrong? The danger now is that what we have created can become independent and go its own way. Is the world going to be taken over by robots? Already there is talk of their 'creativity' – not the power to create *ex nihilo*, but the ability to create music and art and literature from raw materials. The debate used to be about whether chimpanzees could do these things; now it's focussed on computers. But can computers *think*? And if they cannot think at present, will the time come when they *can* do so? Might they perhaps begin to control *us*? There is enormous scope for horror fiction and for the film industry here, but the basic question is an important one. If they do become independent and shake off the shackles of colonial rule, what next?

Everything would seem to depend on how they are programmed, of course – and that means that everything depends on those who do the progamming. Looking back over the history of the development of technology, one can find cause for both admiration and distress. The flint tools developed all those centuries ago were used for hunting and for agricultural use – necessary tools for feeding the people; but some of them were crafted into spears in order that those who used them could attack one another.   The discovery of how to smelt metal opened up similar diverse paths: the same skills could be used for both good and evil.

And so it has continued ever since. Good and evil can arise from the same invention.   The Luddites, for example, attacked the machinery in their factories because they saw it as an attack on their livelihood which was aimed at bringing profit to the mill-owners, while they themselves were made redundant, though it could also be argued that it would – eventually – relieve them of drudgery and bring them better working conditions. The use of gunpowder and the development of modern ships and aeroplanes and missiles has brought terrible destruction and misery to millions of people, and yet those same inventions can all be used for benign purposes. Surgeons use technology to perform the most extraordinary operations and bring life, but even their skill can be misused. Sites spreading so-called social data can be immensely useful, but they can also, as we have recently been made aware, cause enormous harm. Cut down a forest in order to grow more food, and you may destroy the livelihood on which indigenous people depend. Open up new oil-fields or begin fracking to keep us warm and you may cause even greater harm to the climate and the stability of the land. We need to think very carefully about the best way in which we can use the resources we have been given and the skills we have developed, and balance the pros and cons in their use. The easy answer is not necessarily the best.

Since I am supposed to be a biblical scholar, it seems appropriate to ask what the Bible has to say about technology.   Sadly, the answer seems to be 'very little'. There are of course plenty of examples of people applying skills to practical purposes – Noah building the ark and Solomon the Temple, while Isaiah talks about fashioning pots. Jesus himself and Joseph before him, were said to be carpenters or builders – both skilled occupations; wisdom is described in the book of Proverbs as a 'master workman' when God created the world, fashioning things according to God's instructions.   But at first sight, the Bible seems to offer little obvious advice about how we should *use* technology.   Perhaps we should dig a little deeper.

Now one of the sad things about how words are used today is the bad press that is given to the word 'theology'. I often find newspaper editors, for example, dismissing ideas as 'theological' – by which they mean that they are of no practical use. In other words, they think of theology and technology as opposites! I would argue that in fact the opposite is true, since though the Bible may not provide practical guidance about how to build or fashion the articles that we require today, it does offer a lot of guidance about how we should behave, and the questions we should ask ourselves before we 'do' anything. In the Old Testament, the Israelites are offered a choice: between serving the Lord – which meant obeying his laws – and going their own selfish way. The reward for following the Lord, according to the book of Deuteronomy, will be prosperity and happiness. Typically, men and women have tended to interpret those promises in individual terms, but they are addressed to the people as a whole, so refer to the way our actions affect society. God' laws were famously condensed by Jesus, among others, into two: love God and love your neighbour. St Paul, trying to work out what following Jesus meant, spelt his guidance out in lists: on the one hand, there were people who pursued love of others, kindness, humility, generosity, and care for others; on the other there were those who thought only of themselves and their own well-being and happiness, were selfish, unkind, quarrelsome, and arrogant. We only have to look at the world in which we live and the attitudes of those in power to see the danger: politicians and those with wealth and influence rarely seem to ask how they can love their neighbour. And when it comes to the development of technology, inventions can be used in diametrically different ways. The great danger, as we have seen, is that developments meant for good can be used by those whose motives are evil.

But that, of course, is part of the in-built vulnerability of the universe. Everything can be used for good or for evil. The Bible begins with the affirmation that God created heaven and earth; and he created, not robots, but men and women with free will. Technology is itself one of God's gifts to us – the ability to bring our minds to bear on a practical problem; but like all gifts, it can be misused.   It's up to us all, whether we have technical skills or not, to do our best to ensure that inventions are used for good, not evil, and to ask whether the skill we are applying to problems will benefit others, and so be a way in which we can 'love' our neighbours. Are we using technology to increase *our* profits and prosperity, or to foster the well-being and happiness of others?