The big question that keeps coming back

Dennis Gedge MInstCES, Consulting Engineer

SOMETIMES one can only read about, as opposed to actually seeing in the flesh (or even taking part in), debates between those who form the philosophical background of the day. Although this background is subtle, it is a powerful but perhaps unrecognised influence. In early July this year, delegates at the 2009 conference of the Society for Philosophy and Technology had the opportunity to see the interplay of ideas from many thinkers during the course of a few days at the University of Twente in the Netherlands.

The conference was entitled 'Converging technologies, changing societies' and it was brought about by a joint understanding by some engineers and philosophers of the interrelation between the technology of the physical world (and also to some extent the abstract world) in which we all live, and a realisation of the need to bring a sound philosophical approach to the application of technology.

The society is an academic one, uniting many universities from around the world with strong links between Europe and the United States. Over 250 delegates from many parts of the world, not all of whom were academics, attended this conference, which clearly shows a recognition at least of the importance of the subject.

Philosophy in engineering

The role of philosophy in engineering is not formally recognised in engineering practice, but this is not the case in many universities. How often does one hear it said that *"universities are turning out graduates with no practical common sense, and if they are going to be any use to industry they are going to have to learn the difference between theory and practice?"* The missing basics have been identified; the qualitative reasoning skills. This is not equivalent to saying why are we using sledgehammers to crack walnuts but, more to the point, why are we cracking nuts anyway?

Formal philosophical reasoning has a part in this, and some university courses, particularly in the United States, now include philosophy as part of an engineering course. Teachers of philosophy, not surprisingly, find that some engineering students tend to shy away. Perhaps philosophy is seen as just another soft subject, and not a macho or rigorous one which will be of any use at all when it comes to taming nature in the form of grand structures, or implementing far reaching schemes to bring a better life to entire populations using the nanotechnology that we are only just beginning to develop today.

Engineers tend to get put off their stroke if they think their work is not considered rigorous enough, and there is still that underlying feeling in the engineering profession that their work is not highly thought of by the public. The time has come to move on, and those in the engineering world should stop worrying about what they think their status is, and just get on with their job. Many occupations are unsung, engineering could be one of them.

Without morality

In some ways philosophy exists as a discipline or profession within many other practical professions, such as medicine, law and engineering. Whether or not philosophy exists just within engineering as opposed to the subject of technology is another question. Indeed, whether or not engineering is a strong or weak profession from the philosophical point of view is a subject at the forefront of current debate, and one which was further developed live at the conference. A strong profession in this sense is seen as one which has a high regard for ethics, such as medicine or the law. If it is accepted that there can be no philosophy without morality, it is doubtful whether there could be any engineering either, but, on the other hand, technology certainly exists without any morality.

Alternatively, the law is seen as a profession centred around justice, a strong ethical concept; although in practice it only concerns itself with legality, which is a manmade concept — and which can be far from just. For example, the obsolete laws on such things as slavery. Philosophers would argue, though, that their role is not merely to serve to make other professions work, they also have a duty to reflect, and even to warn society.

The Borg

Across the world, many other academic philosophical projects concerned with understanding technological developments are currently being undertaken, particularly in the field of how human beings relate to the new systems which are proposed. For example, robots are being designed to actually look like human beings and to possess seemingly human mannerisms when it comes to helping medical staff give care to patients. Is this like saying that bedside manner can be programmed?

Abstract questions about such things as whether or not it will ever be possible, or indeed desirable, to construct computer-controlled robots with a form of operation which we might call free will are also important for those directing technology to consider. Much research is being undertaken in this area. It is concentrated upon our understanding of what we believe free will to actually be. Is it something that might be programmed in terms of causes and effects, or is it something different and much more random; more related to an understanding of what good and evil might be?

The possibilities of nanotechnology as far as medical practice is concerned are daunting. The ethical questions raised are difficult when it comes to complicated diagnoses that might be readily available

regarding a patient's propensity to either succumb to or resist disease or deterioration. Successful experiments have already been undertaken to implant objects within human brains in order to alleviate disorders or, in some cases, to enable patients with damaged bodies to operate computer controlled devices just by thought.

The horrific possibility of the computer controlling a human brain has also to be considered, as does the recurring question of whether or not a brain is just some sort of computer. Should technical research be undertaken or even be allowed in certain fields? In some ways, isn't the pursuit of immortality itself inhuman? Is our mortality a powerful focus to all of us? Nanotechnology also has a weird possibility for harm. For example, could minute particles be implanted into food or drink without a population's knowledge, so that computers could then transmit data in some nightmarish Orwellian manner?

The good life

The good life is an ancient concept sought since the earliest civilizations, but it is notoriously difficult to pin down and measure. Philosophical research has a bearing on such organisations as the United Nations when it comes to considering priorities in the civil engineering fields, such as water supply and communications by road that are very much needed by populations in deprived areas. Politicians inevitably control the purse strings. How engineers might influence them is another burning and recurrent question. Perhaps the well known complex lithograph by the artist Maurits Cornelis Escher (1898-1972) showing one hand being drawn by another, which itself is drawing the first hand (www.mcescher.com), might help us in our understanding of how this works. Indeed it might throw some light upon how technology and philosophy themselves relate.

Philosophy is not concerned with following rules, it is more about recognising and developing principles. No one yet has satisfactorily defined in precise terms the difference between good and evil. Free will, consciousness and altruism all lie at the base of philosophical debate. These are the questions which come back again and again.

Like all other academic subjects, it develops according to the society and times in which it is produced. It can give us no definite answers, but it can help us, as practising engineers, to frame questions. Sometimes it might be able to give us pointers as to where our activities might be best directed.

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Converging technologies, changing societies was organised by the University of Twente, PO Box 217, 7500 AE Enschede, The Netherlands. The scientific committee comprised many members from other universities around the world.
w: www.spt.org   w: www.gw.utwente.nl/ceptes