

## The onus is on us

BY PETER DeVITA, P.ENG.

**A**s engineers and Canadians, it is important that we take a leading role in defining and supporting ethics within science and technology. Ethics is a thread that binds the practitioner, the profession and the public; but ultimately it is the practitioner who is responsible.

Any profession consists of two key factors: applying a set of skills (learned through study and experience), and a code of ethics. A skill without ethics is an occupation, not a profession.

The practice of a profession demands the taking of responsibility, the exercise of good judgment. Without ethics, an outsider might question the motivation of a professional. Was an act made in the client interest, or simply in the interest of the practitioner? A code of ethics is the defining parameter of the expectations the public will have of a professional practitioner.

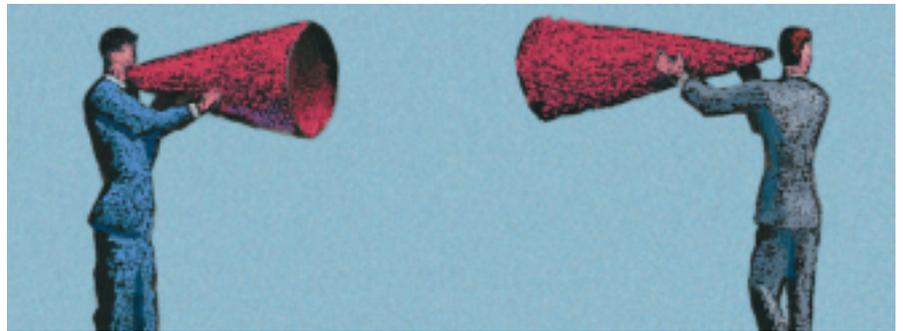
### A self-regulating profession

In Canada, we have developed a unique system of licensure based on the concepts of self-regulation and peer review. Indeed, we have gone as far as placing the sword of government behind the profession through acts of provincial parliament. On what basis have governments and the public entrusted so much power? Justice McRuer wrote in the 1968 *Report of the Royal Commission of Inquiry*:

“The granting of self-government is a delegation of legislative and judicial functions and can only be justified as a safeguard to the public interest. The power is not conferred to give or reinforce a professional or occupational status...What has to be safeguarded against is the use of the power to license for purposes other than establishing and preserving standards of character, competence and skill.”

Clearly he, too, is looking for good character to practise the skills of a profession.

The entire concept of self-regulation rests on the public trust of that profession. Without it, they would soon lose confidence



The practitioner, the profession and the public are intertwined through our Code of Ethics. Following the code is a key factor in ensuring safety and trust, for all involved. Despite the inter-relationship however, the onus of responsibility falls ultimately to the practitioner.

in the ability of the profession to run its affairs in the public interest. Ethics, then, is fundamental to the very existence of a self-regulating profession. Without it, PEO would be in jeopardy.

### Ethics—What is it exactly?

A simple definition says that ethics is the theory of morals. It is a code of behaviour. The Greeks had a view of philosophy that put physics on one end and ethics on the other. Physics deals with the way things work; facts are gathered through observation. Ethics, on the other hand, can't be learned by observing but only through reflection and reason.

A more formal definition of ethics taken from the text *A Critical Introduction to Ethics* by Philip Wheelwright, says: “Ethics is the systematic study of reflective choice of the standards of right and wrong by which one is to be guided, and of the good works towards which one may be ultimately directed.”

In his book *Death of the Guilds*, Elliot Krause builds a strong case for the conflict between capitalism and the professions. In his view, the capitalist is driven by the profit motive alone. In contrast, the professional acts in the interest of others by striving to

make the world a better place for all. Krause sees the decline of the major professions' guild power as a detriment to society.

He asks, “Who controls the services critical to our lives in the modern world?... If the doctors, the lawyers, the engineers and the professors lose their power over the delivery of health care, legal services, applied science and knowledge itself, and they lose it to capitalism and the state, what will be the implications for all of us?”

Krause recognizes the “good will” of those in the professions and is calling on us to re-establish and strengthen our roles in society. At times, he has some very harsh words for us.

Of course, this describes the U.S. Canada is completely different, right? We may wish it to be so, but Canadian engineers share many similarities with our southern neighbours. PEO has also struggled with this whistleblowing problem as well. After banging our collective heads against the wall for years, we stopped working on the issue.

Nevertheless the problem still exists. Paragraph 2(i) of the Code of Ethics says, “A practitioner shall regard the practitioner's duty to the public welfare as paramount.”

What does an engineer do when he knows his employer is putting people delib-

erately at risk? Are we expecting engineers to risk their livelihood? How can PEO ask for such a sacrifice from a member/licensee and yet offer no support?

The Ontario Society of Professional Engineers may be able to offer what was never available at PEO. But I think that PEO could still go further. Licensees should have a right to privacy and to the privilege of disclosing to PEO authorities—perhaps an ombudsman—activities that are detrimental to the public interest.

We aren't at this point yet. Nevertheless, PEO hasn't stood still over the last few years. In April 1999, Council added clause (n) to section 72(2) of Regulation 941/90 that defined "Harassment" as professional misconduct. Society's views and interpretations of what is right and wrong change over time. We never have it totally right, but hopefully we get better as we go. It is interesting to note that newspaper reports have cited sexual harassment as the biggest problem in the workplace today.

### Technology—good and bad

According to Greek mythology, Prometheus stole fire from the gods and gave it to humans. This was a clever way of saying that humans had learned to control this element of nature. Fire can cause severe burns and even death. When it is controlled, it can cook our food and provide warmth against the freezing cold; thus giving us comfort and life.

So it is with all technologies. There is a risk for harm and a potential for benefits. It depends on how we use technology. It depends on both the skills and ethics of our practitioners. Software controlling a gamma ray camera can, and has, killed when the intensity was too high. The same instrument saves lives when used properly.

Over the previous century, the rate of change of science and technology has continued to expand at an accelerating pace. As new science is discovered, humans eventually use it in some practical way. As that transition occurs, we move from the practice of science to that of engineering. This transition underlines all new emerging disciplines, such as software engineering and bioengineering.

One hundred years ago, 25 per cent of the population adopted electricity in 46

years. In recent times, 25 per cent of the population has adopted the Internet in just seven years. Now, 46 years is an entire working career. So 50 to 100 years ago, you would be pressed to notice that a new technology had been introduced. Today, a new technology every five to 10 years will mean that we see several new disciplines in the course of one career.

This rate of change of technology is driving new behaviour paradigms and puts the public increasingly more at risk than ever before. Krause is correct when he says, "As the market becomes more sophisticated, the role of the engineer becomes more important."

That the engineer's role is amplified is the principle object of the *Professional Engineers Act* which says that we practise engineering "in order that the public interest may be served and protected." I want to highlight the word "served." We often talk about protecting the public, but we are also called upon as a profession to bring benefits to the public from our practice. As with fire, we are asked to provide warmth without harm. We are supposed to do good for our society.

I have related how a practitioner, the profession and the public are intertwined through the Code of Ethics of our profession. The code expects the individual practitioner to be of good character and to act accordingly. It is this code that gives the pub-

lic the trust and confidence in the profession to permit it to govern its affairs through self-regulation and peer review—the reasons for PEO's existence. And finally, the public itself is justified in its expectations that the profession will act in the interests of society, especially as new technologies are introduced that put the public at risk in unknown ways. Clearly, the onus of responsibility for all this falls on the practitioner.

It is more incumbent now than ever before in the history of humankind that engineering professionals take serious leadership in the affairs of our society. We are in the best position to understand both the benefits and the risks of applying technology to human endeavours. Through adherence to our Code of Ethics, we have the "good will" to act in the public interest. ❖

[Ed. note: this is adapted from Peter DeVita's speech to Women Engineers of Ottawa as part of the Claudette Mackay-Lassonde tribute.]

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