On the need for professionalism in the ICT industry

If information and communications technology (ICT) is to fulfil its potential in improving the lives of all, then the importance of the professionalism of its practitioners cannot be overemphasised. This is, of course, true of all occupations; but, there is an additional reason to highlight this in the case of ICT and other new technologies. In his paper, the Hon Michael Kirby says that Justice Windeyer, one of his predecessors in the High Court of Australia, 'once declared of the relationship between law and medical technology, that the law generally marches in the rear and limping a little'. Assuming that the situation is the same for ICT, and we have good evidence for this, we have strong reasons for emphasising the importance of professionalism in ICT. Kirby raises a number of problems in regulating technologies, particularly new and rapidly changing technologies, a central one of which is clearly ICT, and these suggest that the problem is even worse than that stated by Windeyer. Kirby writes:

> From the perspective of the law, they [biotechnology and ICT] present a common difficulty that, no sooner is a conventional law made to address some of their features, and to regulate those deemed necessary for regulation by reference to community standards, but the technology itself has changed. The law in the books is then in great danger of being irrelevant, in whole or part. Language written down at one time may have little, or no, relevance to events that happen soon thereafter (see Chapter One, this volume).

Kirby is convincing in showing that serious problems exist in the attempts to regulate new technologies, including ICT. The one already mentioned is its rapidly changing nature and the difficulty of the law keeping pace, but there are others too, for example, the global nature of ICT. Apart from laws regarding international trade or conflict, most laws do not extend beyond national boundaries and many are even narrower, applying to only a specific region of a nation. National borders are largely irrelevant to ICT; local regulations have only limited power. For example, regulating pornographic material on the Internet, if that is deemed necessary, is difficult, because the sites hosting the material could be outside the jurisdiction of the legal system that formulated the laws. This leads to another of Kirby's worries about regulation. To effectively block relevant material, regulation for the control of pornography and other material must be draconian. A major problem with this approach is that it almost always lessens the value of the Internet by blocking non-offending material as well. Additionally, it raises concerns about freedom of speech and expression.

The regulatory issues that are raised by Kirby do not show that regulation should not be attempted. There is a need to curb excesses and limit abuses of this technology, but there are no easy answers to the question of how best to achieve this. The interesting question is framed around how we can best ensure that ICT serves the interests of society in general, rather than merely those of the few, vested interests, given the problems with regulation? The answer proposed in this book is professionalism. There is a strong argument that professionalism is particularly important in new and rapidly changing technologies. This may sound idealistic, and based on the false assumption that professionals will always behave well, even in the absence of regulation, but it seems to be the best approach given that regulation has such difficulties.

Later in the book, the concepts of professionalism, a professional, and a profession will be considered more closely, but, informally, a professional is someone who takes his work seriously; is an expert, at least to some extent relative to the population at large; and, can take a 'big picture' view of his work and see it in the context of society and life more generally. One aspect of professionalism would be seeing the relative importance of one's work and its ethical and social aspects. Being a professional even in this informal sense, is different from being, in the words of well-known computer ethicist Don Gotterbarn, a 'gun for hire' (Gotterbarn, nd) — someone in the ICT industry who sees work as purely a source of income.

This discussion is important not only because of Kirby's arguments about the problems of regulation of ICT, but also because there is some evidence that many working in ICT do not see themselves as professionals, and nor do they see professionalism as significant. This will be developed further in Section Three and is mentioned by John Ridge in Chapter 2.

The two main facets of professionalism to be emphasised here are moral responsibility and trust, both of which are central to the notion of a professional and to maximising an industry's, or occupation's, social value.

First, responsibility. Taking moral responsibility for one's own actions, or what amounts to more or less the same thing in this context, being morally accountable for what one does, places certain restraints on behaviour. Legal responsibility or accountability obviously places restraints on what one does, but here we are more interested in a situation where few regulations exist.

There is a strong link between professionalism and moral responsibility (something also developed in Section Three). A professional has special, and socially useful, knowledge or skills. This places that individual in a position of power relative to those who lack that knowledge, but who have a need for it. They are dependent on the professional. This makes them vulnerable

to some extent with respect to the professional and, as individuals, we have greater moral responsibilities towards those who are vulnerable (see Goodin, 1985, for a detailed discussion). So, with respect to those with whom they relate professionally, professionals have moral responsibilities over and above their normal moral responsibilities as human beings. An ICT industry, then, comprising people who see themselves as professionals and acknowledge the responsibility that such a role entails, should require less regulation.

Another reason why professionalism is important is that professional behaviour engenders trust and a trusting environment has a number of advantages over one that relies on regulation, enforcement and compliance. Living and working successfully in groups requires a degree of trust. I must trust that others will act in ways that are conducive to harmonious living and working, and they must trust that I will do the same. Groups function better the more trust that exists between individuals and, without any trust, they could not function at all (Putnam, 1994). The necessity for mutual trust applies also to economic efficiency. Where there is lack of trust, there must be monitoring and surveillance, filling out of documents and keeping of records, and someone must oversee at least some of these. This is largely unproductive work. Robert Putnam and James Coleman (1990) talk of trust as social capital, the ability of people to work together for common purposes:

> Like other forms of capital, social capital is productive, making possible the achievement of certain ends that would not be attainable in its absence. … For example, a group whose members manifest trustworthiness and place extensive trust in one another will be able to accomplish much more than a comparable group lacking that trustworthiness and trust (Coleman, 1990: 302, 304).

Without trust, people cooperate only under a system of formal rules, which are often called 'transactions costs'. These costs are, in effect, a tax on the lack of trust. Francis Fukuyama, talking about trust in society in general, says that costs incurred by police, lawyers, prisons, and so on are 'a direct tax imposed by the breakdown of trust in society.' He continues:

> People who do not trust one another will end up cooperating only under a system of formal rules and regulations … This legal apparatus, serving as a substitute for trust, entails what economists call 'transaction costs.' Widespread distrust in a society, in other words, imposes a kind of tax on all forms of economic activity, a tax that high-trust societies do not have to pay (Fukuyama, 1995: 11, 27–28).

Our concern is not with society in general, of course, but those working in the ICT industry, an industry that, if Kirby is right, is difficult to regulate. Being in

an industry that is difficult to regulate has some advantages for professionalism. Less regulation means more autonomy (at least in a generally law-abiding society) and this gives more scope for 'doing the right thing' and being trustworthy. In this environment, the individual is better able to display professionalism.

We keep our word and do the right thing, for a variety of reasons. Often, hopefully, we do the right thing simply because it is the right thing; we are basically moral people. Sometimes, of course, rules and regulations, and the threat of punishment if we disobey them, play an important role in determining our actions. Another motivating factor is self-interest. Good behaviour can be rewarded in many ways and, as a result, reputation or esteem are influential incentives. Most of us want people to think well of us. The thought that esteem or something very like it, plays an important role in modifying our behaviour, has a long history and is expressed clearly by David Hume:

> Our reputation, our character, our name are considerations of vast weight and importance; and even the other causes of pride; virtue, beauty and riches; have little influence, when not seconded by the opinions and sentiments of others (Hume, 1975: 316).

Andrew Alexander and Seumas Miller (Alexander and Miller, 2010: 100) talk of the 'virtuous triangle' — reputation — self-interest — ethics. It is in our self-interest to be highly regarded, to have a good reputation, which is enhanced by behaving well. This point is discussed extensively in the literature on trust. In general, people like to be trusted and are perturbed if they are not trusted. This desire to be seen as trustworthy is, in turn, an incentive to behave in a trustworthy manner. The desire to have a reputation of trustworthiness is a matter of self-interest that can be achieved through ethical behaviour. While this motivation is not always paramount and can be overridden by other considerations, for example, financial gain when 'we can get away with it', it is an important consideration, one that must not be overlooked.

While the desire for esteem is important it can also, however, be a double-edged sword. In some contexts, this desire can motivate bad behaviour. I might want to impress my friends with my toughness by displaying aggressive behaviour, or my colleagues with my financial prowess by engaging in clever but dishonest business deals. In the right contexts, however, it can be a useful motivation for good.

What follows from all this? Because of the difficulties of regulation in the ICT industry, as discussed by Kirby, professionalism has special importance. The issue, then, is how best to promote professional conduct. One motivating factor is esteem, or reputation, but this, while important, is not enough. What is required is an environment that is conducive to, and encourages, professional

and good behaviour. Such an environment is of course supported by some level of regulation together with a disciplinary mechanism to punish breaches of the regulation. A more positive element is a structure that rewards good behaviour, perhaps with promotion, bonuses or increased salary. Codes of ethics or conduct and education are also important in guiding behaviour and sections five and six address this. Such mechanisms, taken together, are often referred to as integrity systems. An integrity system is 'an assemblage of institutional entities, roles, mechanisms and procedures, the purpose of which is to ensure compliance with minimum ethical standards and promote the pursuit of ethical goals' (Miller, 2007: 354). This is discussed further in the introduction to governance (Section Four).

The difficulties of regulating ICT highlight the need for further study of professionalism, governance, and integrity systems in the industry. The purpose of this book is to contribute to that study.

References

Alexander, A & Miller, S, 2010, *Integrity systems for occupations*, Ashgate.

Coleman, JS, 1990, *Foundations of social theory*, Harvard University Press, Cambridge, Mass.

Fukuyama, F, 1995, *Trust: the social virtues and the creation of prosperity*, Penguin Books, London.

Goodin, R, 1985, *Protecting the vulnerable: a reanalysis of our social responsibilities*, University of Chicago Press.

Gotterbarn, D, nd, 'Computer practitioners: professionals or hired guns', <http://csciwww.etsu.edu/gotterbarn/>

Hume, David, 1975, *A treatise of human nature*, LA Selby-Bigge (ed), Clarendon Press, Oxford.

Miller, S, 2007, 'Institutions, integrity systems and market actors', in J O'Brien (ed), *Private equity, corporate governance and the dynamics of capital market regulation*, Imperial College Press, pp 339–70.

Putnam, RD, 1994, *Making democracy work: civic traditions in modern Italy*, Princeton University Press.

Biography

The Hon Michael Kirby. When he retired as a Justice of the High Court of Australia in 2009, he was Australia's longest serving judge, having first been appointed to judicial office in 1975. His work (1975–84) as inaugural chairman of the Australian Law Reform Commission brought him to public notice, including for his engagement with the interface of law, science and technology.

He has served on many international and United Nations bodies, chairing two expert groups of the OECD on issues of informatics and participating in the UNESCO international bioethics committee, which addresses the law and ethics of the human genome project. In 1991 he was awarded the Australian human rights medal and in 2010 he was co-winner of the Gruber Justice Prize.