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## **Editorial**

### ***Science and Engineering Ethics* Enters its Third Decade**

#### **Raymond E. Spier and Stephanie J. Bird**

Corresponding Author  
Raymond E. Spier  
6 Parklands Place  
Guildford, Surrey GU1 2PS  
United Kingdom  
Email: r.spier@surrey.ac.uk

Stephanie J. Bird  
P.O. Box 2007  
Wrentham, Massachusetts 02093  
USA  
email: sjbird@mit.edu

During the last 20 years public discourse in the developed and developing worlds has changed radically. The terms "ethics", "morals", "rights", "safety", "privacy", "media", "genetic engineering", "information technology", "big data", "robots", "satellites", "environment", "climate", "fracking", and "security" have loomed large and are set to grow larger. How do these concerns, topics and technological developments affect the way people will think and behave in the years ahead?

It is not possible to predict the future, but it is necessary to take a view of what the future might be, so as to head off imminent disasters. The dystopic depictions of George Orwell's "1984", Aldous Huxley's "Brave New World", Alvin Toffler's "Future Shock", Arthur Koestler's "Darkness at Noon" and Franz Kafka's "The Castle" seem to forecast what is likely to arise rather than project imagined, fanciful futures. There are some indications that these less than idyllic possibilities are materializing when one examines recent debates about privacy versus security, engagement in conflicts in distant countries, the societal impact of

computers, information technology and robots, war ("defence") by remote control, and the effects of changing climate on the lives of citizens. Remembering the quotation of Edmund Burke (1729-1797) that "*All that is necessary for the triumph of evil is that good men do nothing*" it is clear that something must be done. But what?

*Science and Engineering Ethics* is a tool, a component of a system whose properties are expressed in the dissemination, catalysis and stimulation of ideas that examine and seek to improve the way people and societies behave.

To do this effectively, the words used in efforts to communicate ideas and potentially change behaviours, and the definitions of those words, must be carefully considered so that the meaningful transfer of information and ideas are is achieved. Yet there are problems.

It is facile to use words such as "benefit", "good", "moral", "progress", "value", "norms" and "rights" as if such terms are interpreted universally in the same way. They are not. To some, values lead to morals, to others it is the reverse. To some, ethics are the same as morals ("moral" is the Latinised version of the Greek *ethikos* [Marcus Tullius Cicero {106-43BCE}]). To others these words apply in different arenas – ethics being more theoretical while morals are more practical and relate to customs and traditions. Rights are regarded by some as natural endowments while others opine that they result from entering a form of contract where "responsibilities" and/or "duties" are exacted in exchange for the privilege of expressing a right. How are laws set down and interpreted? For a law to be effective it must have widespread acceptance among the people to whom it applies. International bodies often make laws, rules and regulations that are variously complied with. Moreover different ethical

systems and principles (e.g., utilitarian, consequentialist, deontological, duty, rights and virtue, ethics of care) compete for priority when interests are in conflict.

How may this situation be turned to advantage by the readers of this journal and the people they affect? Immanuel Kant (1724-1804) was as concerned about ends as he was about means. Clearly, in the context of this editorial, the way the journal is used constitutes a “means”. What about the “ends”?

Let’s start with a negative approach to an examination of ends. It is not desirable to want to promulgate harm, pain, suffering, deprivation, injury, ignorance, damage, hurt, disease, trauma, disability, impairment, ruin, spoil, war or detriment. By contrast what is sought is improvement, amelioration, betterment, gain, help, support, progress, advancement, peace, safety, security, privacy, knowledge and understanding, growth, health, and wellbeing. The question this leads to is how may the former set of ends be eschewed while the latter ends are pursued? And what may the role of a journal such as *Science and Engineering Ethics* be in this quest?

A journal is a product of the people whose papers are published, the editors and reviewers who act as quality control gatekeepers for the articles, and a production system (paper copies, online delivery, abstracts, database exposure, publicity, legal support) that involves the personnel of a publisher and their equipment. Apart from these mechanical facets, this journal has a mission to encourage and disseminate thoughts, ideas and experimental findings that seek to achieve the positive set of ends as set out above. It engages with the controversial challenges posed by the circumstances by which it is beset. It seeks to advance ways by which appropriate balances are achieved when issues of privacy are set against

issues of security, for example. It promotes practices that seek to achieve a science and engineering literature of improved reliability. It encourages behaviours that do not simply rely on compliance with the “letter of the law”, but which go beyond that level to pave the way for the implementation of modes of being which people aspire to achieve in the interest of improving their societies. This is not a journal that only engages with the moral issues that arise from the promulgation of research and design projects – though it does deal with these areas; it also takes issues raised in the whole human endeavour that take place in the universities, research institutes, professional associations and the social/industrial complex and puts them into a worldwide context.

In the emerging world where "big data", MOOCs (Massive Open-Access Online Courses), and anti-vaccination movements are coupled with the sensitivities of governments to the opinions of the people, *Science and Engineering Ethics* has an important role to play. Its authors are free and encouraged to grapple with the hard problems of life in this new world. It is only by accepting this challenge and sharing reflections and progressive thinking with the readers of this journal that the issues that beset society can be faced and dealt with. The Editors are committed to doing their part in bringing this about. It is now up to you, reader and author alike to take advantage of *Science and Engineering Ethics* in progressing the enhancement of our world.