

**Science, Ethics, and Appropriate Uses of Technology:
A U.S.-France-Iran Workshop
November 8 – 11, 2009
Statement by Participants**

Convened under the hospitality of the *Fondation des Treilles*, participants from the three countries engaged in discussions on scientific ethics, limited to the areas of biotechnology, cybertechnology, and nanotechnology. While differences in perspective, such as the foundations of ethics, should not be minimized, the participants were pleased at the mutual recognition of large areas of common understanding. The participants, as individuals, associated themselves with the common understandings described here.

It is undeniable that science and technology have had a positive effect on human life throughout history. The rate of progress of science and technology is rapidly increasing, with a corresponding increase in its effect on human society.

Scientific advances are achieved by people of all nations, irrespective of political belief, religion, and ethnicity. The results of scientific research are a common heritage of humankind and, as a general principle, should be openly available to serve all people equally. Furthermore, scientific openness and freedom of inquiry are essential to the advancement of science itself. While some secrecy in the contexts of private intellectual property or national security is inevitable, these should be exceptions, and not the rule.

There are also cases where “dual use” scientific or technological advances have the direct possibility of being used maliciously against the common good. These cases raise the difficult issue that humankind may be better served by exceptional restrictions on the production or dissemination of such results than by the general standard of openness. There is a need to achieve international understanding of what should be the boundaries and norms for these exceptional cases. Such understanding will require open discussions not only among natural scientists, but also with social scientists, policy makers, philosophers, humanists, ethicists, and religious thinkers.

There is a useful place for codes of conduct or ethics, developed by scientists, engineers, and physicians for their disciplines, on both national and international levels. Academic organizations, professional societies, academies, and international organizations should take active roles in the development and implementation of such codes. International codes may allow culturally appropriate differences in practices in different countries. Such differences, however, should be matters of public international discussion, in order to further mutual understanding across cultures and the convergence of international norms.

Standards of ethical behavior should be a part of science, engineering, and medical education. Many values such as objectivity, honesty, fairness, transparency of process, openness of results, and conscience are universal in science. These must be propagated as intrinsic to science at all educational levels. Countries, institutions, and individuals should be encouraged to exchange best practices in this area. International standards for curricula in science ethics should be encouraged.