

Book Review: Nanotechnology and Society

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Review of *Nanotechnology and Society: Current and Emerging Ethical Issues*, edited by Fritz Allhoff and Patrick Lin (Springer, 2008) ISBN: 978-1402062087. 300 pages. \$119, Hardcover.

As is well known from philosophers of technology, ethics is a significant dimension of the National NanoInitiative launched in 2000. An impressive number of grants and programs devoted to the ethical issues raised by nanotechnology have been funded over the past few years and the two editors of this volume are among the most active scholars in this field. They already collaborated on editing two previous collective volumes and co-founded the Nanoethics Group, “a non partisan organization” whose mission is to help people understand the ethical issues arising from nanotechnology. For the present volume they gathered a number of leading scholars, most of them linked with two independent organizations renowned for their impartial expertise and experience in societal issues raised by new technologies: the Meridian Institute and the Woodrow Wilson Center for Scholars. In addition to the individual essays are two official contributions : a report from the ethics committee on Science and Technology of the government of Québec and a condensed version of the European Group on Ethics' opinion on nanomedicine.

This collection of 16 papers provides a state of the art survey of ethical issues raised by nanotechnology in 2007. Since this anthology is meant to serve as a kind of textbook that can be used in class, it surveys a wide spectrum of issues dealt with in the programs accompanying nanoinitiatives all over the world. The anthology includes health and environmental risks associated with nanoparticles, societal and legal issues about privacy and patenting, the NBIC program for enhancing human performances, and economic issues. Clearly the purpose is not to develop new perspectives or in-depth analyses on these already classic topics. Rather, it is to help students to discuss them and policy makers to deal with them.

With this pedagogic aim in mind the editors seem extremely concerned with the establishment of nanoethics as a discipline of its own. In their introduction they raise the question of the uniqueness of nanoethics. Is it a new applied ethics? Is it legitimate to encourage speculative ethics about far-fetched futures with an inclination for science-fiction or should nanoethicists be content with cost-benefit analyses of near-term risks? There is no unanimous or consistent response to these questions. While Jean Pierre Dupuy, who wrote the anthology's forward, makes the case for the unique metaphysical dimension of the NBIC program technologies, the editors' introduction adopts a more skeptical and pragmatic tone. The editors suggest that there are no specific issues--not even more intense issues--raised by nanotechnology that would require an applied ethics, like biomedical technologies do. Nevertheless, the editors argue that nanotechnology requires ethical attention. In an essay entitled “the bearable newness of nanoscience,” Arthur Zucker, a philosopher from Ohio University, argues against Georg Khushf that ethics is not integral part of nanoscience. Zucker writes that nanoscience does not present specific ethical issues except when it becomes a business and as such requires a business ethics especially to avoid conflicts of interests. He calls for a re-examination of science as a profession. By contrast, in another section of the volume dealing with industry and policy, Ashley Shew argues that nanotechnology is unique and requires a specific code of conduct.

From such a heterogeneous collection of considerations and opinions, one gets the impression of a patchwork which gives a sense of the diversity of issues but does not make up a coherent picture. The anthology contains a number of stimulating contributions that raise new issues to be addressed. For instance, in the last section about global issues the question of relativism emerges from Joachim Schummer's paper. Since nanotechnology is developed all over the world in a climate of competition while ethics is traditionally rooted in local contexts, attached to cultural systems of values, how is it possible to envision international regulation of nanotechnology? Just in order to prepare the ground we have to start an inter-cultural dialogue which itself requires a kind of ethics! Even after this cascade of papers and volumes on nanoethics, there is plenty of room for scholars to think about nanoethics!