

## Editorial: “Nanoethics in the Asian Context”

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This issue features a collection of papers devoted to nanoethics in the Asian context, broadly construed. As nanotechnology is spreading to countries outside the West, many economies in Asia and elsewhere are adopting it hoping that the technology could solve some of the problems that are there in the countries. It is envisioned, for example, that the technology could help them leapfrog over obstacles toward economic development. It still remains to be seen, however, whether this attempt will be realized and in what way. In any case, the spread of nanotechnology in non-Western cultures also carries with it a number of conceptual and ethical problems that might not be as salient when the technology is embedded in the cultural milieu in which it was born.

The papers in this special section discuss this problem in their own particular way. They discuss public perception of nanotechnology in Iran, ability expectations in some policy documents regarding science and technology in Asia, and a comparison between nanoethics environment in the EU and China. The first paper, “Public Perceptions of Nanotechnology: A Survey in the Mega Cities of Iran,” by Mehdi Rahimpour and his colleagues, is an empirical survey of how the

Iranian public view nanotechnology. The proposition is interesting considering that Iran is attempting to become a fully participating member in the world community in science and technology; thus it is interesting to see how the cultural baggage of modern science and technology is received by the public in a culture that is steeped in tradition. The result of the survey, however, is a rather positive one. Iranians on the whole have no objection to nanotechnology, though some have voiced their concerns about the possible risks and safety issues. In general the authors found that age, educational attainment and career do have significant impact on how the public receive nanotechnology.

In the second paper, “Nanoscale Science and Technology and People with Disabilities in Asia: An Ability Expectation Analysis,” Gregor Wolbring discusses the concept of ableism in the context of science and technology policy in some Asian countries. More specifically, Wolbring wants to bring the expectations of the disabled people and of science and technology policy as appears in important documents together. This can be achieved through a focus, not only on medical and assistive devices which have been the concern of technological developments for the disabled, but also on modifying the environment itself in order that it become more friendly to the disabled. Wolbring sees that on the whole science and technology policy in at least Malaysia and Thailand are not inimical to the disabled, but perhaps the policy should be based on the view that the physical and social

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environment itself is traditionally built with the expectations of the non-disabled, something that could alienate the disabled.

The last paper, “Global Ethics and Nanotechnology: A Comparison of the Nanoethics Environments of the EU and China” by Sally Dalton-Brown, focuses on a comparison of nanotechnology policy in the EU and in China. She found that the EU and China have the same concern regarding possible toxicity of nanoproducts, and also that both regions regard development of nanotechnology as an important step toward economic development and prosperity. However, decision making mechanisms are widely different. Whereas in China the focus is on the responsibility of individual scientists, in the EU the government plays a more active role and is expected to be much more accountable to the public. Thus Dalton-Brown shows us how the culture and tradition behind each country influences how each formulates and enacts their respective policies.

On the whole, then, the papers represent a range of concerns shown by scholars over how the impact of nanotechnology in Asia should be understood and what kind of embedded values are implicit in documents or practices of those involved in nanotechnology in Asia and beyond, as well as how the public in general view this new form of technology.

Nanotechnology is a kind of technology that is very malleable and applications from it abound. Hence,

there are bound to be a growing number of ethical problems that will engage nanoethicists for some time to come. Apart from the problem of nanotechnology for development, which has been discussed rather extensively in the extant literature, the metaethical issue of whether there could be universal values as regards to nanoethics is also an interesting topic which deserves a closer look, especially with special attention to how nanotechnology, understood as manipulation of material in a very small scale, has an impact on broader social and cultural values and on an even broader context of intercultural interaction. Another important area is to have a critical look at how the traditional beliefs and religions of Asia—Buddhism, Islam, and other indigenous beliefs—view nanotechnology and how the ethical conundrums arising from the spread of nanotechnology into non-Western cultures could be illuminated, as well as how these traditional beliefs could even give insights and answers to these conundrums that others, including those who do not practice those religions and beliefs, could also benefit from those answers.

Looking at global and intercultural issues within nanoethics is thus an emerging subfield. The future of the field looks bright and there are many interesting issues and problems that lie ahead.

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