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## **Itty-bitty Ethics: Bioethicists see quantum plots in nanotech concern...and quantum bucks in buckyball brouhaha?**

In a paper released 28<sup>th</sup> January, five University of Toronto (UT) ethicists accuse Prince Charles of “fear-mongering” and ETC Group of condemning poor nations to exports of “bananas and t-shirts.”<sup>1</sup> The authors speak enthusiastically about the potential of nanotechnology to improve conditions in the developing world and they express dismay that, in their view, “commentators” are now focusing primarily on risks instead of benefits.

**Bioethicists as moral-ventriloquists:** “Their paper reads more like a stock tip than a study – complete with ‘forward-looking statements,’” says Pat Mooney, executive director of ETC Group. “They put Prince Charles in their title to ‘sex up’ the report and then they attack him for opposing nanotech. Next, they announce that ETC has called for a moratorium on lab research and new products in order to get publicity and create a nano-divide for the South.” Mooney scratches his head, “but Prince Charles hasn’t spoken a public word about nanotech and, even though our role is highlighted in the paper, these ethicists never even tried to talk to us during their four month and 30-person interview process.” Mooney telephoned the authors shortly after the report came out. Two of the authors returned his call together using a speaker-phone. “It was amicable enough,” Mooney recalls, “but they didn’t seem to know that the Prince hadn’t made a public statement on nanotech and they didn’t want to discuss their paper, saying it would be better to talk face-to-face. So I invited them to Winnipeg; I think the ball is in their court.”

**Ethical Ecophagy:** ETC Group believes the study, published electronically on nanotechweb.org, an Institute of Physics (UK) web site, actually offers very little new information. “It may be a signal to the nanotech industry that they have friends in Toronto,” Pat Mooney says. “This could be self-serving in the short run but self-defeating in the long run if the ethics of nano-ethicists become as suspect as they have for biotech.” Kathy Jo Wetter of ETC’s US office comments, “It’s important to keep in mind that the research for the paper was partially funded by the pharmaceutical industry [Merck & Co., GlaxoSmithKline] and a financial services behemoth [Sun Life Financial]. “When the biotech industry couldn’t convince the public their products were safe and useful,” Wetter continues, “they brought out bioethicists to talk about feeding the hungry and curing the ills of the poor. Now Industry’s launching the same kind of ethical-salvo for

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<sup>1</sup> Erin Court, Abdallah S. Daar, Elizabeth Martin, Tara Acharya, Peter A. Singer “Will Prince Charles et al diminish the opportunities of developing countries in nanotechnology?” Published on the Institute of Physics web site, nanotechweb.org (<http://nanotechweb.org/articles/society/3/1/1/1>)

nanotech. One well-known nano ‘commentator’ posted a summary of the UT paper with an even more provocative title, ‘Why does Prince Charles want to hurt poor people?’ Of course, ethics are crucial to any issue, but,” Wetter asks, “does Industry go to bioethicists as a way to assess the social implications of their products or as a public relations ploy?”

The premises of the paper are that:

1. Debate is irresponsible if it slows the development of a potentially useful technology
2. Nanotech is safe until proven otherwise and risks will be “managed”
3. Nanotech (as well as biotech) will benefit the poor if only detractors in industrialized countries would keep quiet
4. Poor nations should emulate the science and technology model that made industrialized countries rich
5. Concerned people (i.e., “Prince Charles *et al*”) are disingenuous at best and, at worst, are harming the poor

**1. *Debate slows progress?*** When ETC Group first raised concerns about the lack of nanoparticle regulation in any country and the overdue necessity for broad societal dialogue on the socioeconomic implications of the new technology, billions of taxpayer euros, yen and dollars were already being spent on nanotech research; scores of products were already in the marketplace; and investor hype about nano as “the next big thing” was everywhere. The information available touted nano’s potential benefits with hardly a reference to risks or social disequilibrium. ETC has been drawing attention to concerns recently articulated by scientific authorities at the universities of Liverpool, Oxford, Rice and, most recently, Leuven, as well as studies from DuPont and NASA. If the technology is slowed in light of emerging scientific findings, it won’t be because the “debate” is wrongly focused on risk instead of benefit. It will be because regulators have finally – a quarter-century late – owned up to their responsibilities.

**2. *Incautious ethicists:*** The authors’ objection “to the emerging tendency to raise fears” even before there is “much” scientific evidence that nanotech could be harmful is surprising coming from bioethicists, as it flies in the face of the Precautionary Principle. The Precautionary Principle says that governments have an ethical responsibility to take preventative action to avoid harm to human health or the environment, even before scientific certainty of the harm has been established. “Policies in Washington, Brussels, and Tokyo are being driven by one simple fact,” says Pat Mooney from ETC’s headquarters in Winnipeg. “There are more scientists working on nanotechnology in the area around Beijing than in all of Western Europe – at one-twentieth the cost of a European scientist. We are in the middle of an arms and trade race. Health, social justice (especially related to disabled people) and environmental concerns will be completely sidelined unless we act quickly.”

**3. *Pro-poor tech?*** Could nanotech benefit the poor? Of course it could. But the track record is not promising. Nanotech follows a history of promises to solve hunger and poverty made by proponents of new technologies (nuclear, chemical, and biotech included). The simple truth is that new technologies cannot solve old injustices. Technology is not an alternative to sound social policies. As many – including the UT ethicists – have pointed out, nanotech could possibly bring better, cheaper disease diagnostics for people and crops, provide safer and affordable vaccines and improve water purification. The list of potential benefits mentioned in the UT paper is not exhaustive. For example, nanotech could significantly improve solar cells offering major benefits to remote communities. Further, nanotech could reduce raw material demands, increase recycling and slash transport and energy costs. But none of this will transform the poor into a profitable market for multinationals. Even if we can diagnose diseases better, will the poor be able to afford the patented drugs? It’s not the diagnosis, it’s the appropriate social support system

and the cost for treatment that is missing. Globalization – in the form of today’s trade, finance and patent systems – ensures that the control of new technologies will remain with the rich.

**4. Model developments?** The historic evidence is clear that each new technology wave swamps the unsuspecting poor as it elevates the rich. History also shows that technology waves are manufactured. The manipulation of intellectual property regimes and marketplace oligopolies along with governmental collusion have usually managed to dictate which technologies come forward and whose interests they serve. This is not necessarily a model developing countries should be encouraged to follow. Rather than attributing industrialized countries’ wealth to a “science and technology development model,” it should be acknowledged that the wealth was secured through colonialism and the unsustainable exploitation of the earth’s natural resources.

**Southern voices:** The bioethicists argue that “opposition from Prince Charles, ETC Group and others in North America and Europe should not be permitted to diminish the health, environmental and economic opportunities of the poor in Africa, Latin America and Asia.” ETC Group agrees. The South is perfectly capable of critically assessing information in order to make their own decisions. Far from excluding the South from this process, ETC Group began its work on nanotechnology by organizing regional workshops in Thailand, Chile, and South Africa. The workshops sought the advice of indigenous peoples, small farmers and people in the disability movement – voices notoriously absent in the nanotech debate. ETC has been especially concerned to engage the disabled in technology discussions since many disabled people feel that industry and bioethicists speak in their name, or on their behalf, without actually listening to them. In the past eighteen months ETC has taken their research to governments, scientists and civil society in China, Philippines, Malaysia and India in Asia; to Mexico and Brazil in Latin America; to Egypt and South Africa. ETC has conducted seminars on nanotech at the last three World Social Forums. But with corporations and governments around the world investing upwards of US\$6 billion *per annum* to develop nanotech, there is no doubt that the South is hearing other voices besides those of ETC Group and a member of the British royal family (who has yet to make a public statement on the matter).

**5. International convention:** ETC Group agrees with the authors of the UT paper that “most fundamentally, the challenge here is the global governance of science and technology.” Since 2002, ETC has called for a UN treaty to assess new technologies: ICENT – International Convention on the Evaluation of New Technologies. The UT ethicists’ recent proposal for “the formation of an international network on the assessment of emerging technologies for development” may be similar, although ETC is committed to a legally-binding UN-level treaty.

**‘Plenty of room at the bottom?’** Nobel laureate Richard Feynman’s 1959 speech, “There’s plenty of room at the bottom,” is often identified as the starting point for the field of nanotechnology, and there is certainly plenty of room for the participation of all interested people. “The authors and ETC seem to agree on the scope and need for a public dialogue,” notes Kathy Jo Wetter. “We also agree on the need for a global instrument to assess new technologies. Finally, we seem to concur that the technology’s positive and negative implications need study. Clearly, there is plenty of room for a sincere discussion about ethics. But,” she concludes, “just because the technology starts at the bottom doesn’t mean the discussion should.”

*“Why do drug companies want to give money to bioethicists in the first place? In the public relations business, this approach is called ‘third-party strategy.’ Third-party strategy is defined as the art of getting your message into the mouth of an authoritative third party. Often, when a drug company is launching a new drug, it recruits a third party known as a Key Opinion Leader: an influential figure respected by his or her peers and often eagerly sought out by the press. The*

*KOL could be a grand rounds speaker at a teaching hospital, an author on the talk show circuit, or a freelance journalist interested in covering a medical conference. It could also be a socially conscious bioethicist...It's no mystery, then, why pharmaceutical companies want to brand themselves with bioethics. But do bioethicists really want to brand themselves with Pharma?"* – Carl Elliot, “Not-So-Public Relations: How the drug industry is branding itself with bioethics,” *Slate*, <http://slate.msn.com/id/2092442/>, Dec. 15, 2003.

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