



Surely “[w]e may ask what world views will nanotechnology come to express. To what, and whose, ends will these drive it? Even at the level of basic research, science is not completely value free. Scientists may be making assumptions about a range of vital moral and ethical categories without realizing it. As nanotechnologies develop, with what world views will these be harnessed and driven by whose aims and dreams?” Donald Bruce asks this in a publication (2006) edited in the context of the Nano2Life Network dealing with basic questions of nano(bio)technology.

To make this question complete one should, of course, also wonder, what values people have who are skeptical of or against nanotechnologies, be it in research or on the market. And last but not least, what are the values of those people who just don’t care? Do they also have a special worldview or is it the absence of any worldview that determines their indifference?



In the quoted text, Bruce gives a couple of examples to illustrate what he considers values. Here are some:

- (1) The notion of free and curiosity driven-research, as a justification and paradigm in itself.
- (2) The Enlightenment ideology of human-centered progress.
- (3) A transhumanist dogma, driving forward human evolution by physically changing humans.
- (4) The aims and emphases of different religious belief systems.
- (5) A neo-liberal winner-takes-all capitalist system.
- (6) The promotion of the ‘quality of life’, and so on.

Other values could be growth and competitiveness of a national or the EU economy, goals for environmentalism, movements for social justice etc.



Obviously, one could think along those lines of values that speak against or that speak for nanotechnological developments. But, strikingly, there are values that cannot be easily categorized, like the promotion of the quality of life. Here the question would be how that quality should be defined – ‘complete absence of technology and a life in harmony with mother nature’ as well as ‘getting the best medical treatments and gadgets that make life easier’ would be possible answers. So ‘quality of life’ as a value leads to other values behind it. Are there different kinds of values?

Values are the conscious or unconscious standards of orientation that are guiding the behavior and actions of individuals or groups. Different cultures in the world or within a single society might develop different sets of values.

For example in the debate between the United States and Europe frequently (and often rather vaguely) “European values” are invoked to illustrate differences.



Different sets of values might be crucial when it comes to determining how to deal with possible risks. Do people underline the need for safety or security and prefer it to risks, or are people more willing to take risks because taking risks is considered a value in itself? Is the guiding value ‘progress’ or ‘security’ or something completely different? In the debate with the US concerning this issue, it is often called a European value ‘that technology is to be practiced in the context of its society’ while the US are attributed an ‘unreasonably’ technophile attitude.



Especially the experts of risk assessment and risk management have to deal with the questions of values if they want to offer a wider risk governance framework to integrate also concern assessment. Concern assessment tries to determine the different

☞ attitudes of publics towards a certain issue and the values touched, to answer questions of acceptability.



More theoretical questions concerning values arise when you ask yourself what a value actually is.

One answer would be that values are completely relative – they depend on people, culture, time and many other parameters. What possesses value for a certain group of people can mean just the opposite for another group.

On the other hand, some philosophers insist that there are at least some values that are not relative and therefore binding in any case. Concerning ☞Ethics they criticize that ethical approaches like Kantianism or consequentialism just produce formal rules of behavior but that there is no content that would define what is desirable and what not.



Also, you could distinguish between different kinds of values. Does something have a value in itself, or does it have a value as a ‘means’ to achieve something else?

Money is supposed to be valuable, to be good – not as such, but only because it has an ‘instrumental value’ – you can buy other things with it, for example a new computer or an expensive medical treatment that your insurance won’t pay for. But then, all these things might be ‘only’ instrumental, too: You need the new computer to be able to work faster; you need the medical treat-

ment to be able to continue your triathlon training. And you need to work faster because you want to have more time for your children ... and ... and. But eventually there’s something that is no instrument any more, that is valuable in itself, and that you call ‘intrinsic value’.



Q: ‘European values’ and other values are still somewhat vague. Where can one find such values and how can one find out, what values people have if maybe they are not aware of these values? A: People who try to set up a risk governance framework have to find out these values if they want to do concern assessment. One way would be to conduct stakeholder (organizations) dialogues where different societal groups like NGOs, churches, industries associations speak their mind. You can also enter into dialogue with citizens, giving them information on certain aspects of, for example, labeling of nano products, asking them to form an opinion. It is also interesting to analyze codes of conduct like the one from the European Union for research in the field of nanotechnologies. The principles that are formulated there also express values like a precautionary approach, the emphasis on economic growth etc.



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## ☞ Links to other Portfolio sheets:

☞ Nano-Ethics   ☞ Code of Conduct   ☞ Soft Regulation   ☞ Risk

## 🕒 Literature: Print & WWW

Bruce, D.: Nano-2-Life Ethics – A scoping Paper on Ethics and Social issues in Nanobiotechnologies. In: Ach, J. and N. Jömann (2006).

Ach, J. and N. Jömann: Nano-Bio-Ethics. Ethical Dimensions of Nanobiotechnology. LIT-Verlag, Berlin 2006.

Allhoff, F., Lin, P., Moor, J. and J. Weckert (Eds.): Nanoethics. The Ethical and Social Implications of Nanotechnology. Wiley, Hoboken, New Jersey 2007.