

Self-responsibility and autonomy

Dual Use Research of Concern (DURC) and risk management in science

Greg Becker

“Mastering others is strength. Mastering yourself is true power.”

Lao Tzu

One definition of DUAL USE RESEARCH

“Research that, based on current understanding, can be reasonably anticipated to provide knowledge, products, or technologies that could be directly misapplied by others to pose a threat to public health and safety, agriculture, plants, animals, the environment, or material.”

(National Research Council, Biotechnology Research in an Age of Terrorism, National Academies Press, Washington DC, 2004.)

9/11 has changed the world forever.

Today, some may see that sentence almost as a platitude. Nevertheless, these terrorist attacks had also serious consequences for science on a global scale. Although no science was whatsoever involved in the attacks, in the aftermath of Bin Laden’s horrific terrorist masterpiece, all sciences have got into the reticule of concerns - as the origins of potential high security risks.

Before 9/11, concerns towards applied science focussed on the development of weapons of mass destruction (WMDs) “somewhere outside”; “homeland- science” had not been seen as a potential threat to national security. This view has changed, since the view on terrorism had been widened, and potential domestic threats have been added to the list of serious security risks.

Although “DURC” contemporarily focusses mainly on *life-sciences* – what is quite a flexible term – the birthplace of modern concerns toward the dangerous aspects of science was the successful Manhattan-Project, its backgrounds and all its connected aspects, including the role of then leading physicists like Heisenberg who tried in vain to build *the bomb* for Hitler.

In other words, in the 20th century it was physics that raised first strong concerns on the Janus-face of science: on the one hand serving mankind and its future with creating knowledge and contributing to an amazing technological progression, and on the other hand delivering dangerous know-how that could seal the fate of humanity and all life on this planet.

But there is another factor for a critical view on possible dangers originating from sciences.

The assessment of technological progression has obviously become more critical since the environmental impacts of applied science as technology have become obvious. If this view is doing justice to science is debatable – nevertheless, this attitude is already widely spread, and the liberal approach of letting science do what science *gotta* do, has been put at jeopardy by cautious forces from outside science.

How to control science?

That is indeed the leading question not only of many politicians and ethicists dealing with science but the central question, “DURC” is revolving around:

Is the final answer to that question “control from the outside”?

Is it “self-restriction of science”?

– Or is it perhaps a mix of both these opposing concepts?

In its centre, Greg’s presentation deals with this question, following his concepts of Integrated Ethics in science, established in 2007 at the Triple-B-Faculty, UJ.



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