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The Future of Science in the 21st century: Integrity and Responsibility in Science: Navigating through Conflicting Social and Epistemic Demands

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Martin Carrier (Bielefeld University)

Judging the Socially Responsible Nature of Research and Innovation: Options and Obstacles

Abstract: Responsible research and innovation (RRI) features the dialog of science “with society,” and research performed “for society,” i.e., for the benefit of the people. I focus on this latter, outcome-oriented notion of RRI and discuss two kinds of problems. The first one is the predictability of the future course of science. It looks as if research could only be made subject to demands of social and moral responsibility if its practical outcome could be foreseen with some reliability. In fact, future pathways of science are predictable to some extent. However, the risk of being wrong is high enough to not placing too much emphasis on such anticipation. The second problem concerns moral evaluation. The benefit or harm produced by certain research and innovation achievements is often hard to estimate. Against this background of limited technology foresight and ambivalent moral assessment, I explore the options left for RRI. First, RRI should contribute to maintaining a wide range of approaches and to avoiding foreclosing opportunities prematurely. Second, judgments about RRI should draw on zones of convergence among the variety of research approaches pursued. Third, decisions about implementing a technology should be revisable. Fourth, the more specific inclusion of demands from society should be reserved to technology development. Fifth, in many respects, the social compatibility of a new technology is due rather to the social context than the inherent features of the product. Favorable circumstances are transparency, representation of all relevant parties, and procedural fairness. As a result, many promising pathways of research and obstacles to introducing a technology can be identified without detailed knowledge of future findings and yet unknown technological features.