

Round table: Education and research in an interdisciplinary environment – Open communication and responsible citizens – Science and ethics

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Abstract

If the physical sciences are to be successful in addressing some of the biggest problems facing humankind, it is imperative that they understand how to engage with society. This proposition is more challenging than it might appear as there are various, and at times competing, models of how such engagement should take place.

In this talk I discuss four paradigmatic ways of governing the relationship of science and technology with society, situating each in historical context.

Starting with the ubiquitous ‘linear model of innovation’ I locate its origins and provenance, how it came to be replaced, at least in part, through a ‘grand challenges’ paradigm of science policy and funding. I then describe how this paradigm in turn has been subjected to rigorous analytical critique by a co-production model of science and society, and how this model, in part, is being put into practice through a framework of responsible research and innovation.

I conclude with reflections on how a framework of responsible research and innovation can help navigate the grand challenges affecting the lives of citizens in the coming decades.