

Grand Policy Challenges in the 21st Century: The Need for Interdisciplinarity

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In the 21st century, humanity faces an array of grand policy challenges that demand the scale of broad, sweeping policy reforms reminiscent of the Progressive and New Deal eras of a hundred years before. Like those prior eras of policy upheaval, many of the challenges of the 21st century are driven by rapid changes in the scientific and technological foundations of every aspect of human societies, from agriculture and health to economic production and global security. Unlike those prior transformations, however, universities seem ill prepared to contribute the necessary ideas and human resources to successfully address the grand challenges of the 21st century. Can universities reverse course and step up to the plate? A lot depends on the possibility of developing new and innovative approaches to interdisciplinary policy research and education in the coming decades.

In this essay, I propose to argue for the need for new forms of interdisciplinary policy research and training in the policy sciences. Core features of my argument include:

- **The interdisciplinary character of the grand policy challenges of the 21st century.** Whether it is managing globalization, adjusting society to the biotechnology and nanotechnology revolutions, preventing and adapting to climate change, avoiding transnational pandemics, curing cancer, transforming energy production, ending global terrorist threats and otherwise ensuring international peace and security, etc., today's problems inherently cross disciplinary boundaries. In no case can these grand policy challenges be understood – or solutions identified, designed, or evaluated – in mono-disciplinary terms.
- **The need for a major transformation in policy research in universities.** I will point out that the nation's scientific leadership recognized the need for interdisciplinary research to address grand social challenges decades ago and has spent billions of dollars reorganizing the nation's scientific infrastructure around interdisciplinary research and problem solving. Unfortunately, I will also point out, no comparable reorganization of the university has taken place with regard to the social sciences and policy research. The social sciences remain deeply bound up in disciplines that are explicitly opposed to engagement in real world social problems.
- **The history of interdisciplinary policy research as a foundational element in the social sciences.** The social science disciplines, I will point out, emerged out of traditional domains of scholarship (especially history), precisely in response to the need for highly focused research programs that could inform the policy challenges of the day. Social scientists were front and center in identifying social problems and designing policy responses to those problems. Over time, however, the social science disciplines have become rigidly theoretical and strongly antithetical to the pursuit of policy relevant research. Universities have allowed this transformation

- to take place and need to take active steps to reorganize social science research to recreate a focus on interdisciplinary efforts to identify, describe, analyze, and solve policy problems. This focus must transcend the deep divisions among the social sciences; and it must overcome the divide between the social sciences and other fields in the university, including the humanities (which need their own transformation), the natural sciences, medicine, law, and engineering.
- **The failure of policy schools.** The shift of the social sciences away from policy relevant research contributed foundationally to the rise of policy schools as an alternative form of interdisciplinary social science scholarship. Policy schools offer a strong potential focal point for interdisciplinary policy research and education at universities. However, policy schools have their own problems. First, they remain trapped by the gap that divides the social sciences from the natural sciences, engineering, medicine, law, agriculture, the humanities, etc. Only a few policy schools have made a major effort to build ties to the natural sciences and engineering, and those have done so at best on the margins. Second, policy schools have become narrowly focused on quantitative, reductionist skills training for future policy professionals that inadequately prepares them to address the grand policy challenges of the 21st century.
 - **The need for university-level reform.** The final piece of my essay will focus, therefore, on the need for and possible strategies of university-level reform to meet the grand policy challenges of the 21st century.
 - **Strategic investments in the social sciences and policy schools to advance interdisciplinary research and education.**
 - **Focused commitments on bridging the humanities, social and natural sciences, medicine, law, and engineering in the identification, analysis, and solution of policy problems.**
 - **Strategic investments in fields of scholarship that are critical to solving the grand policy challenges of the 21st century but are not adequately represented in university research and training.**