Forum

January 22, 2020

Ethics in technology assessment

Graves and Cook-Deegan do an excellent job of explaining the importance of including ethical considerations within technology assessment (TA). I would like to add several points.

First, considering ethical impacts is essential but insufficient for grappling with the normative dimensions of technological innovation. Ethical analysis tends to focus on the impact of innovation on individual people or groups, while overlooking impacts on the basic structure of society. An example: an anticipatory ethical analysis of the interstate highway system might have weighed the value of speedy personal transport against the danger of fatal vehicle crashes. But would it have considered that the voracious demand for gasoline would provide a rationale for expanding US military capabilities in the Middle East, contributing to establishing the politically powerful military-industrial complex of which President Dwight Eisenhower warned in 1961? Ethical analysis is crucial, but so is analysis of technologies' structural social impacts.

Second, TA as we have known it focuses on the social impacts of individual innovations, such as driverless cars or smartphones. But the effects of technologies on the basic texture and structure of society are typically a product of synergistic interactions among complexes of seemingly unrelated technologies. An example: face-to-face community life in the United States has been attenuated over time by the combination of air conditioners and TVs that lure people off their front stoops on hot summer days, suburbs built without sidewalks, smartphones that keep people's eyes glued to their small screens, and so on. Studying the ethical and social impacts of individual technologies is important, but so is assessing the synergistic effects of technological complexes.

Finally, Graves and Cook-Deegan mention the value of enrolling stakeholder representatives in TA, but they overlook the importance of also involving laypeople who are not members of organized stakeholder groups. Stakeholders such as an environmentalist, a corporate chief executive, and a labor organizer will each bring a crucial value orientation to the table, but experience shows that neither individually nor collectively will they call attention to the types of structural social impacts that I have been highlighting. In contrast, methods of participatory technology assessment that have been pioneered in Europe over the past three decades—such as citizen-based consensus conferences—tend to do a better

job in this regard. Such methods have now been implemented many times in the United States, including by the nongovernmental Expert and Citizen Assessment of Science and Technology (ECAST) network.

Experts and stakeholders bring along a robust base of technical knowledge and well-honed analytical capabilities. But lay participants in a well-structured TA process often add heart-and-mind human, ethical, and political-power considerations from which the experts shy away or in which they are simply inexpert.

To be fair, Graves and Cook-Deegan are considering the real-world political challenges involved in reestablishing a national TA capability. Incorporating structural social analysis within TA might (or might not) pose risks to the enterprise—but omitting such analysis guarantees that Congress will remain poorly informed about some of technologies' most profound social repercussions. That said, even a nonideal technology assessment agency would be far better than none.

Richard Sclove

Cofounder of ECAST
Author of Reinventing Technology Assessment: A 21st Century Model *(Woodrow Wilson International Center for Scholars, 2010)*