
LETTERS *to the* EDITOR

Innovation and the university

SUSAN HOCKFIELD, president of the Massachusetts Institute of Technology, argued in her Dec. 13 op-ed, "A model for tackling the energy challenge," that universities can help the nation solve its energy problems by developing "organizational structures . . . that encourage large multidisciplinary teams [that], where relevant, permit . . . partnerships with industry and government." Yet history shows that generating truly revolutionary scientific and technological breakthroughs is a bottom-up process. It is fundamentally driven by individuals and small teams that are willing and able to explore questions that would never be addressed by large goal-oriented organizations.

In the past, universities have contributed to goal-oriented research through large semi-autonomous laboratories that could draw on a university's expertise. Examples include the Draper Lab, which produced advances in inertial guidance; MIT's Lincoln Lab, which produced innovations in radar and surveillance systems; and the Johns Hopkins lab, which produced innovations in space and underwater technology.

President Hockfield's model for the "new" university would have a negative effect on the overall contributions of great research universities like MIT. It would put enormous sums of money in the hands of administrators who have little or no expertise needed to create true innovation, and it would mutilate the scientific culture of broad entrepreneurial and undirected research that has made universities such powerful engines of innovation.

TED POSTOL,
Cambridge

The writer is a professor at MIT.