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## The New Egypt

I HAVE JUST RETURNED FROM EGYPT, WHERE I ATTENDED THE ANNUAL BOARD MEETING of the Library of Alexandria and met with students and faculty at The American University in Cairo. This is a very exciting time to be in Egypt, with its people empowered by the success of their daring, peaceful demonstrations in Tahrir Square. But the exhilarating sense of freedom is combined with the tension of knowing that the revolution is still in progress and its end point not yet known. Clearly, a great deal of hard work will be needed to establish an effective democracy. In media interviews, I was repeatedly asked, “What should the role of science be in the new Egypt?”

Science is a globally generated, ever-increasing base of sophisticated knowledge about the natural world that greatly benefits humanity. The benefits include labor-saving devices, improved health and nutrition, and many other advances that increase a nation’s prosperity and keep its voters satisfied. But only nations with strong, science-based institutions can effectively harvest this invaluable global source of knowledge, extending and adapting it to meet national needs. Democracies also require the creativity, rationality, openness, tolerance, and respect for evidence and logic that are inherent to science. The prime minister of India, Jawaharlal Nehru, recognized this 60 years ago when he called for a “scientific temper” for his newly independent nation, and a scientific temper is critical to every thriving democracy.

But as my visit made clear, a third aspect of science holds a special relevance for the new Egypt. Scientists in general take it for granted that, to be successful, the scientific enterprise must operate as a meritocracy. Ideas, results, and opinions must be evaluated independently of their sources, because it is what is said that is important, not who says it. Fitting with the democratic spirit of the Egyptian revolution, the scientific results of a young scientist are inherently no less deserving of respect than those of a senior Nobel Prize winner. For a nation to excel in science, college faculty, university leaders, and those who receive funding for research projects must be selected through competitive mechanisms that are entirely based on merit. Likewise, it is the establishment of a strong merit-based culture in both the public and the private sectors that will make the new Egypt successful.

There are lessons to be learned from the mistakes made by other nations. For example, years ago I was shocked by the remarks made by a scientific leader in India who, when asked about the major problem in his large research institute, told me that it was “getting people to work.” In that conversation, I discovered that in India’s government institutions, life tenure in one’s position is normally granted after 1 year of work. This has also been the case in Egypt, and it has contributed to the widely recognized nonperformance of the Egyptian government. I do not believe that it is possible to create an outstanding organization—be it a division of government or a university—with such demoralizing rules. Clearly, an institution thrives when its individuals are not only held accountable for their work, but also when each person is judged by his or her merits, without respect to the individual’s social status or personal connections.

But here is the problem. Who judges the merit, deciding which employees should be promoted and who removed? In science, unbiased peer review provides the foundation on which merit is decided. A similar type of peer review is generally used throughout higher education systems in the United States to produce excellence. But my nation is in the midst of a vigorous debate about how to shift to a more merit-based system for rewarding the 3 million teachers in our public school systems, where a lack of trust in leadership has long prevailed. For the new Egypt, as for the United States, finding a way to ensure that all institutions are merit-based will be a difficult, but absolutely critical, task.

— Bruce Alberts

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