Things we know we know

What is the point of university? In the modern state, we are faced with a plethora of competing and sometimes contradictory answers to this question. To some extent, the answer depends on who is paying, which differs considerably between countries. At one extreme, the Nordic countries continue to fund higher education almost entirely from general taxation. At the other, private institutions in the USA charge the full economic cost of tuition to those who can afford to pay, whilst subsidizing from their endowments the education of the less fortunate. Universities also derive a considerable proportion of their income from philanthropy, from the overheads of research grants and, in some cases, even from the profits of spinoff companies arising from discovery. What do these customers get for their money?

Today's universities provide many services to society. They train the top tier of professionals: clinicians, lawyers, engineers and the like, and constitute an environment for those gifted in the creative arts to develop their talents. But the university's educational function extends beyond preparing students for specific careers. Any masters' degree constitutes a training in problem-solving and analytical thought that is the bedrock of a successful career in business, management, or virtually any modern workplace. Alongside traditional subject-oriented teaching, university courses usually impart also a range of transferable skills: in languages, IT, communication and pedagogy, for example. By turning out a constant stream of trained individuals onto the job market, universities ensure that society continues to function efficiently, that industry is productive and that society is able to address tough and complex problems.

As the major home for frontline research and innovation, universities are also creators of new knowledge. This encompasses both our expanding understanding of what the universe is made of and how it works,

as well as applying this knowledge to generate new technologies and inventions. Universities are thus the indispensable motor of human progress, even if this benefit is hard to quantify.

The principle of academic freedom guarantees that universities also provide an independent voice in society, a bulwark against the arbitrary exercise of executive power in democracies. Even if a government shares opinions with the vast majority of its citizens, democracy requires that there be a place to develop and air alternate viewpoints. The university provides exactly this function, acting as a safeguard that received wisdom can always be challenged, and sometimes overturned by reasoned argument. Academics exercise this right not merely in a last-ditch attempt to dissuade governments from foolish courses of action. Often their views are solicited by the state itself. Universities can help politicians avoid making the same mistakes over and over again and devise new approaches that might actually work.

Amidst these worthy and important functions of the university, it is easy to forget one other crucial role, which is increasingly in danger of being neglected. That is, to serve as the repository of existing human knowledge. As universities come to be run more like businesses and less as traditional academies, any activity that cannot be measured in the form of concrete deliverables risks being sidelined. Whilst the number and quality of publications, patents, externally funded research grants, doctoral and masters' degrees, as well as other academic qualifications, and even artistic and sporting prowess, can be quantified, the thing called 'scholarship', which one could argue is the most ancient and fundamental duty of the university, can only be described in the vaguest of terms.

I recently asked a class how they could be sure of the basic principles of molecular biology. Most could describe the Meselson–Stahl experiment in outline with a little prompting. Watson and Crick's elucidation

of the structure of DNA was said to be a foundation stone of the subject, but nobody could give a coherent explanation of the basics of X-ray crystallography on which the model was based. The fountain of knowledge in regard to these and, indeed, every other aspect of the subject, was considered to be Wikipedia. 'Where does Wikipedia come from?' I asked. The idea that this democratically assembled edifice of knowledge, with potentially billions of authors, was compiled from the published literature by a comparatively tiny number of competent scholars who actually knew the material with sufficient clarity and authority to refine and edit the definitive entry on any given sub-topic had not occurred to them. The things we know we know are only known because someone knows them.

The destruction of the ancient Library of Alexandria, undoubtedly one of the most tragic events in human history, was mitigated not only by the fact that much of the library's contents had been copied and deposited elsewhere, but also by the actual knowledge that scholars carried inside their heads. This 'human library' was ultimately more important than the incinerated scrolls. Today, with knowledge distributed across the internet and electronic libraries, it would require a major catastrophe, such as a nuclear holocaust, to eradicate or corrupt the global repository of scientific knowledge. But even in the absence of such, we still need scholars not just to remember and reconstruct knowledge but to interpret and adapt it. The most vital, but often ignored function of universities worldwide is thus to ensure that the skills needed to accomplish such a feat survive in perpetuity. Those who evaluate and fund our universities need to pay attention to scholarship as a priceless end in itself, in addition to all the quantifiable metrics that nowadays define our 'performance'.

Howy Jacobs

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