

Editorial

Is there a binary divide in engineering education institutions? This term was coined for the division between polytechnics and universities in the United Kingdom. Polytechnics were on one side of the divide—universities on the other. The insinuation was that there was a qualitative difference. This was interpreted as a difference in purpose. Polytechnics were striving for a more practice oriented education of engineers, possibly with less research, more concentration on teaching, and just incidentally with some of the staff with lesser qualifications compared to those of university academics. This is all history now. In the United Kingdom it has been decided that polytechnics become universities. Does this mean that the quality question has lost in validity? Have polytechnics really been universities all along and the division was never a real division? The history of engineering education establishments reflects this development in the British system. Last century engineers were educated for army civil engineering purposes. None came from universities. It took a long time for renowned technical universities in Germany to become established in the university community. There has been a constant striving for higher status amongst educational establishments. This striving could be at the expense of real needs. But the situation is probably more complex and involves economics as well. Every system upgrading the status of institutions involved in education with expensive hardware such as engineering will experience that there is a greater demand for research funding. This demand usually does not keep pace with the supply. Therefore upgrading the institutions means that monetary resources will be squeezed and shared. It may also be asked who will be filling the gap of those institutions that are upgraded? or has the type of education that is being upgraded become redundant? or maybe universities should adopt more of the polytechnic attitudes of the past? There seem to be no universal solutions for these questions. In particular, there are many variations between countries. These differences developed historically, and depend on the total educational environment including schooling. Binary divides exist in many countries including France, Germany and the USA. To make the systems more transparent innovative solutions are needed. Some of these are near the mark such as the system in Taiwan, and possibly also the ideas developed in Poland and other Eastern European countries. These are worth investigating, especially before Eastern Europe copies the Western systems. Before abolishing a binary divide then—it may be expedient to strive for an improvement of the system as a whole.

Michael S. Wald