JONATHAN ST B.T. EVANS *takes a satirical look back from the future.*

The Presidential Address 2038

I AM honoured to accept the presidency of the British Psychological Society. For today's lecture I have chosen to review the state of academic psychology in the UK, and especially to record my observations on the remarkable changes that have occurred during the current century.

Some of the younger members of the audience might scarcely credit the way in which higher education was organised in the early part of the century. At the time of completion of my own PhD in 2003, for example, there were some 70-odd (yes, 70!) separate psychology departments in different universities, each employing their own academic staff and each teaching a distinct undergraduate programme.

Moreover, a huge population of undergraduate students travelled physically to study at each university, often hundreds of miles from their homes, at great expense to themselves and the nation. Many of you might be forgiven for thinking that such outmoded and inefficient practices were abandoned in the mid-20th century, but you would be wrong. Whilst the old system is as far as can be imagined from our current National University delivering its single national curriculum direct to the homes of the students, we should remind ourselves that the current system has been fully operational only for the past 20 years or so.

If the teaching arrangements at the turn of the century surprise you, perhaps you will find the organisation of psychological research at that time to be even more extraordinary. The same staff employed to perform the duplicate teaching of psychology in different university departments were also largely those responsible – in piecemeal fashion – for developing knowledge in the subject. Some universities and departments were much better at this than others, of course – something that was belatedly recognised in the national funding of universities in the later part of the 20th century. For the most part, however, academic psychologists were reliant on bidding for short-term project funding from highly oversubscribed public sources, a most insecure and unsatisfactory system. I well remember the concerns of staff in the department where I ran my own PhD work. They were constantly worried about where their next research grant would come from, and under huge pressure from the university managers to maintain funding.

Another feature of psychological research at this time that would strike us now as very strange was its insularity. For the major part of the 19th and 20th centuries psychology had seen itself as a discipline apart, able to progress knowledge via theories and research methods that were specifically psychological. To be sure, some trend towards interdisciplinarity was present at the end of the 20th century, with the emergence of such meta-disciplines as cognitive science and neuroscience. Nevertheless, within the old university system still operating at the start of the 21st century, single-discipline research was still the norm. How different all this seems from the great National Institutes in which all research psychologists are employed today. It is to the work of these Institutes, and in particular the programmes to which psychologists have contributed most significantly, that I now turn.

PAUL BOX (REPORTDIGITAL.CO.UK)

Before the National University students often had to travel miles to study

I start with the Institute for Genetic Science and Engineering, to which psychologists have contributed much useful behavioural data. We can be justly proud of our involvement in the Institute's most successful programme on sociogenetics. In particular, progress in mapping antisocial behaviour on to the human genome has been quite remarkable. As most of you will know, successful trials have already been completed, and a mass programme of gene therapy for young offenders will be initiated shortly. Obviously the benefits will take time to work through society as a whole, but we have every reason for optimism. In fact the Institute for Computational Social Science (ICSS) has recently incorporated the projected effects of the gene therapy into its forecasting model for UK society. Preliminary results indicate that projected crime rates for the UK in 2060 will be around 30 per cent of the levels seen at the start of the century. This is a truly remarkable achievement in which our discipline played a vital part. This more than compensates for the spectacular failures of evolutionary psychological theory developed in the late 20th century.

Turning now to the Institute of Computational Brain Science (ICBS), I think the story is one of limited and rather disappointing progress. Confident predictions by psychologists and other brain scientists in the early 2020s to the effect that we would by now have a good working computational model of the brain have proved to be unduly optimistic. With hindsight, we should have realised that as a complex system the brain could not be accurately modelled by a system simpler than itself. This lesson should have been learned from other disciplines such as meteorology, where – as we all know – weather forecasts have improved only slightly in past 50 years, and that due entirely to the enhanced speed of modern computers. The problems with brain modelling have, of course, been the cause of much debate within the Institute for Applied Philosophy, with biological philosophers of mind claiming a major victory over their computational counterparts.

Psychologists working in ICBS have, however, made some useful advances in recent years. Computational models of brain development, whilst relatively crude, have been sufficiently useful to provide

new insights into cognitive development. It now appears that children develop their conceptual understanding of the world through a series of well-defined stages. This new theory is causing much excitement, even though a few cynics have claimed that the whole thing was anticipated by a now largely forgotten Swiss psychologist working the mid-20th century.

The Institute for Computational Social Science, mentioned earlier, has been one of the great success stories of modern times. Complicated though society and its organisations are, they are nowhere near as complex as the human brain and accordingly have proved much more amenable to modern computational modelling techniques. Microeconomic models based on network principles have displaced entirely the old-style econometric models on which governments relied for economic forecasting at the start of the 21st century. These models proved to be much more robust in the face of unanticipated world events, which bedevilled the earlier systems. Particularly exciting from the psychologist's point of view is the complex modelling of social and organisational systems. Once the domain of sociologists, we now know that the key lies in specifying the correct psychological principles defining the interaction of individuals. The behaviour of the social system emerges once a model of sufficient power is run to compute the effects of all the local interactions between individual people.

'I have no time for those who claim that psychology has lost its identity'

The relative success of ICSS compared with ICBS has led, in my view, to some unfortunate and ill-judged comments in the media. Whilst social science is an established hard science with secure public funding, brain scientists have been accused by some of being self-indulgent pseudo-scientists. I hope that you would all agree with me that this is a most unfair assessment of very dedicated work on what has proved such an intractable topic. The more-than-useful advances in neurolinguistics have typically been overlooked. It is true that the Explaining Consciousness programme has proved a total failure, and was recently denounced by researchers at the Institute for Applied Philosophy as rooted in a category mistake. Without wishing to snipe at another profession, I must say that the complete failure of philosophers themselves to explain consciousness after two millennia of work on the topic hardly qualifies them to lead the criticism of this programme.

The Institute for Robotics and Machine Intelligence has made steady if not spectacular progress. Researchers in artificial intelligence have in recent years been keen to dissociate themselves from the increasingly discredited field of brain science. They emphasise that the process of building artificial minds does not depend in any way upon the understanding of natural brains. Terminology of a biological flavour has been expunged from the vocabulary. Associative systems have not, for example, been described as 'neural networks' for some years now. In spite of this, I cannot help feeling as a psychologist that the success of these systems depends upon mimicking the behaviour of humans and higher animals. The key seems to lie in the ability of their systems to learn from experience and then apply knowledge to new situations.

There have, of course, been numerous other psychological advances in the 21st century. For example, understanding of human emotion has certainly developed significantly within the Institute for Applied Biochemistry, for example, leading to major advances in the treatment of depressive illnesses. Psychological theory and practice is put to good use everyday in personal selection, business management, education, and many other fields.

Finally, I would like to assure you all that I have no time for those who claim that psychology has lost its identity as a discipline. Although it is true that membership of the BPS fell to less than 50 this year, I believe this is but a temporary setback and have every confidence that our new recruitment drive will soon pay dividends.

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