In 1988, Larry Weiskrantz published in the Oxford Magazine an account of the first 50 years of Experimental Psychology in Oxford, from the establishment of the Institute of Experimental Psychology in 1936 a humble house on the Banbury Road, through its transformation into a Department teaching for two Honour Schools and with a wide ranging research programme in the spacious, well equipped (if perhaps not comely) building on the corner of South Parks and St Cross Roads.

By some reckonings, based on the publication of Fechner's Elemente der Psychophysik in 1860, Experimental Psychology (if not in Oxford) is now 150 years old. This anniversary is marked by an exhibition of the history of the subject in Oxford and beyond, organized by Karine Barker, the Psychology subject librarian at the Radcliffe Science Library. This article is written on this occasion of this retrospective, to outline where Experimental Psychology (EP) has been going in Oxford after the end of the era that Larry Weiskrantz surveyed, during the period 2001-2011 when I have been Head of Department. The history of these 10 years cannot compete with the transformation Larry guided and oversaw, nor with the academic wranglings about the legitimacy of the subject which preceded it. However, the Department has continued to develop in the vanguard of the subject; its work provides intellectual and practical impetus for a wide range of collaborative enterprises across the University, and maintains an outstanding international reputation reflected in its ability to attract exceptional staff and students from around the world.

The distinctive nature of scientific psychology, as an educational and research discipline, is that it requires the student to maintain three complementary perspectives on human beings. First, human behaviour and mental life reflect a prodigious capability for information processing—the subject matter for psychology as a cognitive science. Secondly, our ability to walk, talk, think, see, love and fear is rooted in the structure and operations of the brain and nervous system, which in turn are the product of evolution within a specific ecological niche—the view of psychology as a biological science with intimate links to neuroscience and genetics. And thirdly, these aspects cannot be properly understood without the recognition that human life is fundamentally social—we have social skills and motivations, and we are shaped by the influences of our family, peers, and culture—so psychology is a social science. Cutting across these perspectives is the human and scientific need to understand and help those people whose psychological problems prevent them from adapting to everyday living. Such problems usually combine a cognitive, a biological, and a social dimension. The Oxford Department of Experimental Psychology, while it is probably best known for its strength in work with a neuroscience orientation, prizes the linkage of these multiple viewpoints in its research and teaching, and works to sustain it. The Department's work offers examples that interweave any and all of these threads—the brain activity associated with social rejection in anxious teenagers, the cognitive and visual consequences of preterm birth, and interventions both neurological and educational that can enhance mathematics learning. A unifying theme is that experimental psychology approaches all these questions with an empirical, data-based approach shared with other laboratory and observational sciences, and demands critical, evidence-based thinking in its students.

It is implicit in this view of psychology that it is an outward-looking discipline, not constrained by spurious boundaries where it overlaps with the concerns of the neurosciences, psychiatry, genetics, linguistics, anthropology, philosophy of mind, education, or sociology and social policy. The Oxford department has active collaborations with all these disciplines, and welcomes academic links and structures which help to make these boundaries permeable for researchers, teachers, and students. Larry Weiskrantz's mention of a 1986 "survey of university psychology departments [which rated] ours so far ahead of every other department in the U.K..." can't be matched with quite such effortless superiority today (in the 2008 RAE our average rating was a close second to Cambridge, although Oxford tops the Guardian's 2011 rating table for the student experience in Psychology with clear water ahead of Cambridge). However, I would argue that this reflects the good health of the subject nationally, rather than any decline in the quality of Oxford psychology.

The most significant institutional development for the Department, which approximately coincided with my arrival in 2001, was its membership of the newly formed Medical Sciences Division. I am not in a position to compare this status with the old position of a Faculty under the General Board, although I have some astonishment that the former system managed to keep on working. In any case I don't think that anyone in the Department would now argue that, given the Divisional structure, we find ourselves in the wrong place. In some respects the Department may appear an outlier in the Division, with only minor involvement in medical education, different modes of research in which 'wet labs' play little part, and generally playing the part of a smallish furry (or sometimes prickly) mammal in a forest of big, sleek beasts. However, our mission and our culture have always received not just courtesy, but vigorous support and commitment from the Division, and the Division's resources have helped the Department to flourish. Professor Nick Rawlins, as an associate head of Division before he became Pro-Vice-Chancellor for Development in 2010, acted as an invaluable two-way interpreter between EP and the Medical Division. The Department's work, much of it in collaboration with other departments in the
Division, has been recognised as providing key elements in the Division's overall strategy for neuroscience.

This participation in a shared biomedical theme has not inhibited the continuation and growth of intellectual partnerships with other divisions of the University. The Wilde Professor of Mental Philosophy (currently Martin Davies) is an integrated member of the Department and the PPP Honour School provides a further partnership with philosophy. An active collaboration with Phonetics and Linguistics strengthens a key area of cognitive psychology. The Department’s research on social groups, led by Miles Hewstone, benefits from collaboration with Oxford colleagues in geography, sociology, COMMAS, and the Uehiro Centre for Practical Ethics in studying prejudice and the reduction of intergroup conflict, in segregated or mixed English cities or schools, sectarian divisions in Northern Ireland and other multicultural societies around the world.

One of the most prominent themes in the Department’s work in the last ten years has been the interdisciplinary exploitation of new methods for investigating the human brain. Professor Alan Cowey of Experimental Psychology was one of the original movers in setting up the FMRI centre in 1997, under the aegis of Clinical Neurology but from the outset hosting a rich and varied programme in which EP researchers have investigated the brain activity associated with psychological functions. FMRI rapidly became a leading international centre, not only for the functional magnetic resonance imaging of the brain which provides its acronym, but also for innovation in methods for discovering how brain areas are connected. EP staff such as Kate Watkins working in developmental disorders of speech and language, and Matthew Rushworth’s group with Heidi Johansson-Berg in decision-making processes, have exploited these new techniques to great effect. Dick Passingham pursued a pioneering programme on the brain basis of consciousness and willed action in collaboration with the other leading UK centre for functional neuroimaging in London. EP has also been a leading centre for exploiting the possibilities of Transcranial Magnetic Stimulation, which provides a way of temporarily and selectively disrupting brain processing in vision, language, attention, and action. The most recent development has been with Kai Nobre from EP taking on leadership of the facility within the Psychiatry Department for MEG (magnetic sensing of local brain activity) which as OHBA (Oxford Human Brain Activity) promises to become a centre like FMRI, offering state-of-the-art methods to researchers across and beyond the Medical Sciences Division.

These methods provide a way to link the human brain, where we have a unique knowledge of the psychological processes it serves, to both longstanding and new methods of investigating brain function in animals. EP has been active in such research for many years; its work with non-human primates has had to come through a stormy passage in recent years, but is now flourishing in new facilities, with researchers who are uniquely closely associated with parallel human studies. Work with rodents nowadays has its greatest value in allowing the path from genetic variation, through neural systems, to behavioural differences to be manipulated and studied. Such work is the theme of a recently established Centre for Behavioural Neuroscience, in which EP’s expertise in analysing behaviour can be woven into a range of research programmes including those from Physiology, Pharmacology, Neurology, and Psychiatry. All these approaches based on animals directly feed our understanding of the human brain in health and disease.

Child development has long been a rich vein of study for EP, with Jerome Bruner and Peter Bryant as successive, very distinguished, holders of the Watts Chair. Kim Plunkett established a 'Baby Lab' for research on infants’ acquisition of language in the early 90’s, and when I arrived in 2001 I brought to Oxford, with Janette Atkinson, the Visual Development Unit which for many years in Cambridge and UCL had led internationally the study of normal and abnormal development of visual perception in even younger babies. Other appointments in the Department, including Dorothy Bishop’s recruitment as a Wellcome Trust Principal Research Fellow, and Kate Nation’s research group on reading and its disorders, have strengthened and broadened the developmental theme, with a particular emphasis on linking it to typical and atypical brain development. Oxford has become a major centre for the new subdiscipline of Developmental Cognitive Neuroscience, and we have recently created a new physical facility, the Oxford Centre for Developmental Science which provides a state-of-the-art, family-friendly environment for all the developmental groups in the Department to study children’s developing capabilities.

The strength of an academic Department lies in the community of its members. The demographics of EP staff have given me the good fortune to participate in the appointment of eleven new UL’s or equivalent, in ten years. Most of them are young, appointed in their early to mid-thirties but with an impressive range of intellectual achievement on which they are now building to create lively research groups. It is a source of satisfaction that more than half of them are women (although in a subject where over 75% of undergraduates are female, there may still be room for further progress in academic gender equality). They are impressive in their commitment to excellence in teaching alongside maintaining productive and rigorous research of international distinction, promising to match the generation of Fellows of the Academy of Medical Sciences and of the British Academy in the current senior ranks of the Department. This efflorescence of young talent means, however, that the next ten years are likely to be much leaner in terms of opportunities to recruit new blood. In this, as in other aspects of the coming environment for higher education, I regret that my successor is in for a less rewarding time than I have had.

A key part of the life and strength of the Department, as of many others, is that it attracts and nurtures many people, at all levels from post-docs to senior professors, who hold externally funded fellowships. The contribution these people make to the Department and to research groupings is hard to overstate—a crude metric is that of the 39 people entered in EP’s successful RAE submission for 2008, only 19 held University posts as lecturers or professors. Another challenge for the future will be to find ways that the talent in this group can be retained to energise science and scholarship in Oxford psychology, and that they can fully participate in the life of the collegiate University.

Undergraduate teaching continues to be a central pur-
pose of the Department—both as a goal in itself and because we recognise that one of the main reasons we can attract and retain outstanding staff is the opportunities they find to teach outstanding students. Historically, the first degree course to be offered including psychology in Oxford was PPP—Psychology, Philosophy, and Physiology. This degree is now undergoing changes, which require some background to be understood. Many people in EP and elsewhere saw that Oxford had the academic strengths to provide an outstanding degree programme in Neuroscience—a view reinforced by the enviable success of the Neuroscience MSc course established between EP and other Departments in 1997. The Physiology/Psychology combination in PPP partially met this need. However it drew on a Physiological Sciences course which had its own difficulties. I was asked by the Medical Sciences Division to chair a working group to look at the future of this degree. We concluded that Physiological Sciences had suffered from the requirement to assemble its course distinctly ad hoc, from elements that had been re-organized primarily with the interests of medical students in mind—and also that there were many aspects of modern biomedical science, as well as neuroscience, in which the tremendous strengths of Oxford research were not well reflected in the teaching that was offered. The outcome of this review was the construction of a new, better integrated degree programme in ‘Biomedical Sciences’. The vision of the working group was that the third year of this programme would offer the choice of streams specialising in broad areas of modern bioscience.

Neuroscience is one of these streams, which in the third year is very close to the structure of the previous Physiology/Psychology combination and which now has the public presence to appear as a course code for UCAS—the other streams, to my regret and that of many other bioscientists, have yet to become differentiated. An important feature for the EP department is that psychology lectures will now appear in the first year education of all students taking the Biomedical Sciences programme, even if they are not planning to take Neuroscience options later; important for us because it shows a recognition that the human mind and behaviour, approached through the methods of Experimental Psychology, are an integral part of what a student needs to know about human biology. A further engagement with Divisional education is the course which Janette Atkinson co-ordinates for the Department teaching Psychology to medical students, rightly seen by the GMC as an essential component in the training of tomorrow’s doctors.

The Biomedical Sciences course is an important development for EP and the other contributing departments—I hope it will be a course in which they all feel pride of ownership and will undermine any view that training scientists is secondary to training medical students as an educational purpose of South Parks Road. Psychology/philosophy joint honours will continue—the only loss to regret from PPP is the opportunity, taken rarely but by occasional interesting students, to combine the study of Physiology and Philosophy. However, a new opportunity has arisen from the change in PPP. There is a natural intellectual linkage between the study of linguistics and both psychology and philosophy. In fact this triad, together with computer science, is the basis of the relatively new field of Cognitive Science which has flourished in a number of US universities but with generally less success in Britain. Proposals are now going through the system, with enthusiasm from all three component disciplines, to establish a PPL degree (Psychology, Philosophy, and Linguistics). We hope and anticipate that shortly this programme will attract students probably small in number but high in quality, with an intellectual appetite for this union of formal and empirical study of the mind.

A broadly upbeat account of Oxford Psychology should perhaps be tempered with a warning about undergraduate teaching. Experimental Psychology and PPP—and Biomedical Sciences too—are in Oxford terms ‘small subjects’. This would astonish psychologists and their Vice-Chancellors in most Russell Group universities, where the burgeoning number and quality of A-level applicants for psychology have led to pressure to increase, sometimes double, undergraduate intake at the expense of subjects, often in the sciences, where the human pickings are leaner. But Oxford has neither the problem of weak competition in other subjects, nor structures that allow much top-down direction of how student numbers are distributed. In fact, student numbers reading EP and PPP have slightly declined, as a few colleges without established teaching fellows in psychology decided they could not sustain the subject. Even where there is a psychology fellow, she or he is almost everywhere the lone representative of the subject in a college, with relatively little clout compared to the larger blocs in areas such as Engineering or Modern Languages. There is a significant risk that psychology, and other subjects with fewer than 100 undergraduates per year across the University, could suffer from collegiate decisions taken in isolation without considering the needs of Oxford as a whole or the intellectual significance of the subject. It is not hard to think of ways to avoid this risk—it may be harder to think how the devolved processes of the collegiate university can be induced to adopt them.

Still, psychology, and its associations with neighbouring disciplines, is in a very healthy state in Oxford. A new Professor has been appointed—David Clark who had a long history in Oxford but has more recently been in London’s Institute of Psychiatry. We welcome him with his colleague, Anke Ehlers, who will move her Wellcome Trust Principal Research Fellowship to Oxford. Their programme of research, on cognitive behaviour therapy, has had an extraordinary impact on the treatment of anxiety disorders. It promises to bring to the Department a new focus on how psychological science can be applied to relieve human suffering, and will no doubt lead to new relationships between EP and clinical departments. We also expect shortly the appointment of a new Watts Professor to continue the distinction that this post has brought to Oxford psychology.
