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understanding of the baffling relationship between dental hospitals and their schools.

Addressed in turn are the dental politics which spawned the School, its various locations, the tetchy relations between hospital and school in the inter-war years and the problematic absorption of the hospital into the National Health Service. The tale concludes with the closure of the School as a result of cuts in the overall number of dental students, and an account of the division of the spoils. Along the way, the reader learns of fraudulent Hospital Secretaries, experimental animals falling off roofs, and how the institution was the licensee of a public house—and a good deal about the conflict of interests which arises when a voluntary hospital, supported from charitable donations, exists primarily to give clinical teaching to the students of its School.

The picture which emerges is of an organization locked into the past by pride in its origins. For much of its history the Royal appears to have lagged behind other dental schools in such matters as admitting women, establishing chairs and facilitating research. Its over-attachment to the Licence in Dental Surgery of the Royal College of Surgeons jeopardized its position as a School of the University of London and perpetuated the concept of dentistry as a dependency of general medicine.

Writers on any recent institution face the problem of meeting the divergent expectations of their readers. Alumni may be somewhat disappointed not to find their particular period at the School vividly evoked in the pages of this book, but medical historians will find it a reliable introduction to an area which may be new to them. Those whose interests lie in the history of dentistry may be frustrated by the lack of detailed referencing, the absence of a listing of primary sources and their location, and by a poor index; they may also wish space had allowed for comparison with other dental schools and a consideration of the reaction of the profession as a whole to issues raised. However, the decision appears to have been made to produce a short commemorative history accessible to the general reader. As

such it succeeds admirably and in the process highlights the continuing vulnerability of dentistry to health economics and university politics, and the ambivalence of its relation to general medicine, little changed since the Royal was founded in 1858.

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Larry R Squire (ed.), *The history of neuroscience in autobiography*, vol. 1, Washington, DC, Society for Neuroscience, 1996, pp. 607, illus., \$49.00 (0-916110-51-6).

“In the past we have not been sure whether we were anatomists, physiologists or biochemists, psychologists or pharmacologists. But now we know our identity. Largely thanks to Frank Schmitt’s initiative, we are Neuroscientists”. Thus declared J Z Young, one of the contributors to the present volume, in the first F O Schmitt lecture delivered in 1973 (published in *The neurosciences: paths of discovery*, ed. F G Worden, J P Swazey, G Adelman, MIT Press, 1975). Nearly twenty years later, the President of the Society of Neuroscience, Larry Squire, initiated a project to encourage those pioneers who, with Schmitt, did so much to create contemporary neuroscience, to record autobiographical chapters. *The history of neuroscience in autobiography* is the result.

The format of short, non-directed chapters has been deliberately chosen to encourage the participation of busy scientists—although all are well beyond the normal age of retirement (David Hubel, born 1926, is the youngest)—who might be reluctant to undertake a full-scale autobiography. Thus the style resembles that of the introductory chapters that appear every year in the *Annual Reviews*, and the contributors have been left to interpret their brief in their own way. There is little consistency in how each author has responded: some are cheerfully frank about their personal lives, others focus on their laboratory careers to the exclusion of personal and social lives; some emerge from the page as fully formed

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scientists; others write engagingly of childhood—Sir Bernard Katz' very personal account of life as a Jewish student in Germany is particularly moving and deserves to be more widely known amongst social and cultural historians.

The larger shifts of twentieth-century history are reflected in these accounts—many contributors or their families fled Continental Europe for Britain or America, as waves of political unrest and racial persecution swept across their homelands. Libet, Sokoloff, Kety and Axelrod all had family origins in the Russian Empire, Galambos' parents were from the Austro-Hungarian Empire, and Hamburger was born in Silesia, then a part of Germany. Some families left more than one country. Bernard Katz' father moved from Imperial Russia to Germany in the wake of the Russo-Japanese war; his son left Germany, one of his advisors to do so being Chaim Weizmann, to escape Nazi oppression. Katz senior's failure to obtain German naturalization left Bernard Katz stateless and without a passport, able to travel only on a Nansenpass, documents devised by that neuroscientist turned explorer and ambassador, Fridtjof Nansen. During the second world war however, his father's earlier carelessness exempted him from internment in Britain as an enemy alien, and allowed him to start the research work with A V Hill that ultimately led to his Nobel Prize in Physiology or Medicine for unravelling the ionic mechanisms of neural transmission.

Carelessness, this time on the part of the US Army, saved Robert Galambos from service in the Korean War. Having neglected to discharge him from the Army Medical Service Corps in which he had enlisted as a medical student, but never served, during the second world war, the Army discovered in 1952 that he was technically still a soldier, entitled to ten years' back pay, and promotion to Lieutenant Colonel. The nonsense of the situation being recognized, Galambos' marching orders never appeared, and he remained in his lab, carrying out fundamental studies of the auditory system. Disarmingly, he describes his method, "My plan was simple. The cats and I would

converse, with me asking the questions by delivering clicks and tones to their eardrums, and they replying, one brain cell at a time, through a microelectrode. No theory, no preconceptions; just simple experimental facts". His microelectrodes attracted much attention, and his anatomical collaborator Jerzy Rose carried some back to Johns Hopkins, sellotaped to his car window for safety. Thus, as Galambos remarks, "the Johns Hopkins laboratory entered the single business unit". The "single-unit business" boomed in Baltimore, as recalled here by David Hubel, and by 1958, he and Torsten Wiesel were beginning to record single-units in the visual system of the cat, work for which they were to share the 1981 Nobel Prize.

With any such volume it is tempting to look for common factors in the contributors' upbringings that nurtured their scientific inclinations. Many record their voracious reading habits as children (Kety, Albe-Fessard, Axlerod, Sokoloff), others recall the importance of a chemistry set (Kety, Young and Hubel), a crystal set (Galambos) or natural history collecting (Bullock, Hodgkin) as a spur to studying science. Only Curt von Euler, the son and half-brother of scientific Nobel laureates might be seen as genetically predetermined in his career. One obvious common fact that emerges however is the importance of being male—only one woman, Denise Albe-Fessard, is included. Of course, death and infirmity have already removed many possible contributors to such a volume, and the recent death of one contributor, J Z Young, emphasizes how fragile are our links with recent history.

The Society for Neuroscience is clearly to be congratulated on initiating this historical venture (they have, incidentally, also produced video-interviews with seven of the contributors) and on bringing it to such a successful conclusion. This book is enticingly labelled "volume one", and one hopes that volume two will not be long in gestation. Larry Squire's introduction suggests that these lives "could be a source of inspiration to students", and it is particularly young neuroscientists who

should be encouraged to read this book. Sadly many will ignore it in their haste to push forward the frontiers of science, not understanding that the accounts here are from the creators of the modern science they pursue so relentlessly. More mature neuroscientists will undoubtedly relish the reminiscences. David Hubel's description of painstaking experiments, carried out in a "slapdash set-up" makes particularly thoughtful reading for a modern scientist obsessed with state-of-the-art equipment. Even more thought-provoking, to scientists and historians, are Hubel's observations on scientific research in the 1960s and in the 1990s, the difficulty nowadays of getting, and keeping, financial support; of grant proposals that took him a couple of days to write, now taking months to prepare; and of over-crowding in each research field. Almost unbelievably to modern neuroscientists, he remarks laconically "in 1960 . . . we virtually had the visual cortex to ourselves".

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Elfriede Grabner, *Krankheit und Heilen. Eine Kulturgeschichte der Volksmedizin in den Ostalpen*, Vienna, Österreichische Akademie der Wissenschaften, 1997, pp. iv, 329, illus., ÖS 390.00 (3-7001-0730-7).

The increasing interest in alternative medicine and mild treatments for disease has stimulated debate on how illnesses were treated in the past and on the value of traditional cures. The interest of the folklorist and art historian Elfriede Grabner in folk medicine was first stimulated in the 1960s by the work of her former teacher Leopold Kretzenbacher, later the head of the Institute of European Ethnology in Munich. She describes in an interesting and easily accessible manner certain folkloristic concepts concerning disease. Writing from a historico-cultural point of view, she focuses on the symptoms and causes of disease, and on cures and medical procedures. Her field of research centres on the eastern

Alps of Austria, especially Styria, from the middle ages to the twentieth century.

Grabner's book begins with a brief background chapter on the history and the current state of research on folk medicine, touching on the major problems in this field: the lack of any serious research before the end of the nineteenth century. Even then, as she mentioned in her 1968 article 'The history of research in folk medicine in German-speaking countries' (*Journal of the Folklore Institute*, Indiana University, 1968, 5: 152–7), such research was carried out by professional physicians rather than by historians, folklorists or ethnologists. A period of enthusiasm began in the 1930s led by medical historians like Paul Diepgen in Berlin, but after World War II interest in folk medicine declined when its scientific legitimacy was questioned. Now that the divisions between superstition, mysticism, custom, ritual, and science have gradually become less distinct, confidence in the relevance of folk medical practices to modern medicine is being restored.

In her second chapter about concepts of disease (an important part of traditional knowledge of folk medicine in the east Alps), Grabner describes different folkloristic concepts of fever as well as a number of childhood diseases whose names and interpretations differ in most cases from the orthodox ones. Different terms for fevers, often found in a cryptic form like the "72", "77", or "99" fevers, explained the severity of a disease. Richard-Ernst Bader also tried to interpret the origins and meaning of these magical numbers in his article 'Wurzeln der Iatromagie: Die Zaubersahlen 77 und 72' (*Medizinhistorisches Journal*, 1992, 27: 98–112).

A further chapter deals with diagnosis and prognosis. Grabner mentions that there are special ways in folk medicine to diagnose and predict the outcome of a disease, and she pays attention to two main variants. One is uroscopy, the other the theory that psychological and physical health must be in balance. Folk concepts of disease—that is to say causes, classification and effects—cannot be compared with practices in modern medicine. In folk