

Three years of Neurohistory, 2 : 2007-2010

C.U.M (Chris) Smith
Vision Sciences, Aston University
Birmingham B4 7ET, UK

c.u.m.smith@aston.ac.uk

This annotated bibliography follows the same lines as the first three-year Neurohistory bibliography. It covers the periodical literature from January 1 2007 until 1 January 2010. Interest in the history of the neurosciences shows no sign of slackening: indeed quite the reverse. Whereas the first annotated bibliography covering the years 2004-2007 listed some 350 publications the present bibliography, covering the next three years, lists some 570 articles. These articles have appeared in a wide spectrum of journals and it is hoped that bringing them together in one searchable list will alert students of neurohistory to the widespread interest in the subject and assist in further research.

Key: # Of particular interest * Of outstanding interest

Antiquity (-500CE)

Andrushko VA, Verano JW (2008): Prehistoric trepanation in the Cuzco region of Peru: a view into an ancient Andean practice. *Am J Phys Anthropol.* 137: 4-13. Trepanations were found in 66 individuals and in many cases seems to have been performed as a medical treatment for cranial trauma

Belen D, Aciduman A, Er U (2009): History of peripheral nerve repair: may the procedure have been practiced in Hippocratic School? *Surgical Neurology* 72: 190-194 [DOI:10.1016/j.surneu.2008.03.030]. An historical review and with an hypothesis.

Budrys V (2007): Neurology in Holy Scripture. *Eur J Neurol.*14: e1-6. A discussion of epilepsy, neuromuscular disorders, speech disorders, psychogenic disorders, head trauma, and subarachnoid hemorrhage in 'The Holy Scriptures'

Chang A, Lad EM, Lad SP (2007): Hippocrates' influence on the origins of neurosurgery. *Neurosurgical Focus* 23: E9. A brief review of its subject, including spine injury

Crivellato E, Ribatti D (2007): Soul, mind, brain: Greek philosophy and the birth of neuroscience. *Brain Res.Bull.* 71: 327-36. A review of the leading doctrines on the soul and the mind held by early Greek philosophers and physicians as well as early attempts to localise brain faculties and explain neural disorders

Dimopoulos VG, Robinson JS III, Fountas KN (2008): The Pearls and Pitfalls of Skull Trephination as Described in the Hippocratic treatise 'On Head Wounds'. *J.Hist.Neurosci.* 17: 131-140. A description of the guidelines for trephination in the Hippocratic writer's *Peri ton en cephalic traumaton* (On Head Wounds). [DOI; 10.1080/096470407012196770]

Eftekhar B, Dadmehr M, Ghodsi M, ParasPour A, Ketabchi E (2007): Cranial trephination in ancient Iran. Case illustration. *J.Neurosurg.* 106 (1 Suppl. Pediatrics): 70. Account of a trephinated skull dating from 2800 BCE excavated from a mass grave in the hills of south-eastern Iran

Evans KM (2007): "Interrupted by fits of weeping": Cicero's Major Depressive Disorder and the death of Tullia. *History of Psychiatry* 18: 81-102. A detailed examination of the letters of Cicero (106-43 BCE) show him to have been subject to severe bouts of suicidal depression

Dimopoulos VG, Kapsalakis IZ, Fountas KN (2007): Skull morphology and its neurosurgical implications in the Hippocratic era. *Neurosurgical Focus* 23: E1. Differences in skull morphological characteristics among various human populations were first described by Herodotus of Halicarnassus. The Hippocratic treatise *On Head Wounds* provided the first detailed description of human skull anatomy. The authors discuss the influence of this treatise on the later development of descriptive skull anatomy and on the development of modern neurosurgery

Filler AG (2007): A historical hypothesis of the first recorded neurosurgical operation: Isis, Osiris, Thoth, and the origin of the djed cross. *Neurosurgical Focus* 23: E6. A new textual analysis of the central religious aspect of the ancient Egyptian creation myth reveals what appears to be a description of the oldest recorded neurosurgical operation, occurring circa 3000 BC.

Goodrich JT (2007): Cervical spine surgery in the ancient and medieval worlds. *Neurosurgical Focus* 23: E7. Starts with anthropological material for the prehistoric period and reviews its subject to the medieval period

Garcia-Albea Ristol E (2009): Aretaeus of Cappadocia (2nd century AD) and the earliest neurological descriptions. *Rev Neurol*. 48: 322-7. Nothing is known of this contemporary of Galen but some of his writings have come down to us and this paper discusses his medical books, especially book 3 which includes such matters as headaches, scotoma, epilepsy, melancholy, madness and paralysis.

Kumar R, Mahapatra AK (2009): Concept of brain transplant in pre-historic era. *Child's Nerv Syst*. 25: 393-4. A short account of Hindu myths where Lord Shiva transplants the head of a goat on to his dead father-in-law's body.

Kshetry VR, Mindea SA, Batjer HH (2007): The management of cranial injuries in antiquity and beyond. *Neurosurgical Focus* 23: E8. A review from antiquity through the medieval period

Missios S (2007): Hippocrates, Galen, and the uses of trepanation in the ancient classical world. *Neurosurgical Focus* 23: E11. An examination of Hippocrates' and Galen's written accounts of trepanation in the ancient Greek and Roman world. Examination of those records reveals the ancient knowledge of neurological anatomy, physiology, and therapeutics.

Mohamed, Wael MY (2008): The Edwin Smith Surgical Papyrus: Neuroscience in Ancient Egypt: *IBRO History of Neuroscience*

http://www.ibro.info/Pub/Pub_Main_Display.asp?LC_Docs_ID=3199

A valuable and well-illustrated account of this seminal papyrus focusing on its sections describing head and brain injuries and their treatment, with figures showing the relevant hieroglyphs

Retief FP, Cilliers L (2008): The nervous system in antiquity. *S Afr Med J*. 98: 768-70, 772. Whereas neuroanatomy was developed in Alexandria (4th and 3rd centuries BCE) and consolidated by Galen (2nd century CE) neurophysiology remained mired in error; descriptions of neurological disease were often quite accurate but poor understanding of neurophysiology led to ineffective therapies; a continuing problem was where the 'control centre' or hegemonikon was located.

Rose, FC (2009): Cerebral localisation in antiquity. *J.Hist.Neurosci*. 18: 239-47. A sort overview localisation in ancient Egypt, pre-Hippocratic and Classical Greece, Hellenistic and Graeco-Roman times with a final short section on Medieval neurology.

Sanchez GM, BurrIDGE AL (2007): Decision-making in head injury management in the Edwin Smith Papyrus. *Neurosurgical Focus* 23: E5. An essay based on the Egyptian papyrus

Shbat A, Smrcka V (2009): Children's cranial lesions from Neolithic. *Prague Med Rep*. 110:114-9. An analysis of the skeletal material from the neolithic settlement at Makotras, county

Kladno, showed two children's craniums (identification numbers Ao 8218 and Ao 4184) with pathological conditions and these are discussed

Todman D (2007): Galen (129-199). *J Neurol.* 254: 975-6. A short essay on his life and medical contributions.

Todman D (2008): Warts and the Kings of Parthia: An Ancient Representation of Hereditary neurofibromatosis Depicted on Coins. *J.Hist.Neurosci.* 17: 141-146. Parthian coins depict a nodule on the faces of many kings over successive generations and it argued that these represent the cutaneous tumors of neurofibromatosis. [DOI: 10.1080/09647040601079607]

Todman D (2008): Epilepsy in the Graeco-Roman World: Hippocratic and Asklepian Temple Medicine Compared. *J.Hist.Neurosci.* 17: 435-41. An analysis of the practices of Hippocratic and Temple medicine in relation to epilepsy that reveals some clear differences and also some overlapping features,

Tomey KI, Komotar RJ, Mosso J (2007): Herophilus, Erasistratus, Aretaeus, and Galen: ancient roots of the Bell-Magendie Law. *Neurosurg Focus* 23: E12. Exploration of the work of four ancient scholars--Herophilus, Erasistratus, Aretaeus, and Galen--reveals a remarkable early appreciation of the separate neural pathways (if not the correct physiology) responsible for sensory and motor control.

Tubbs RS, Loukas M, Shoja MM, Cohen-Gadol AA, Wellons JC 3rd, Oakes WJ (2008): Roots of neuroanatomy, neurology, and neurosurgery as found in the Bible and Talmud. *Neurosurgery.* 63: 156-62; discussion 162-3. A review of topics in the Talmud and Bible germane to modern neuroanatomy is presented giving a glimpse of the early understanding, description and treatment of neuropathologies

#Yapıjakis C (2009): Hippocrates of Kos, the father of clinical medicine, and Asclepiades of Bithynia, the father of molecular medicine. *In Vivo* 23: 507-14.

A discussion of Hippocratic medicine (Hippocrates c.460-377 BCE) and that of the somewhat later Asclepiades of Bithynia (c.124-40 BCE) who, it is argued, treated the human body from the perspective of the Epicurean atomic theory and was hence the father of 'molecular medicine'.

Medieval (500 – 1450 CE)

Aciduman A, Belen D (2007): Hydrocephalus and its management in Avicenna's *Canon of Medicine*. *J.Neurosurg (6 Suppl. Pediatrics)* 106: 513-16. Avicenna (980-1037) devoted a large section of the *Canon* to hydrocephaly and this paper translates some passages and discusses his understanding and practice

Aciduman A, Belen D (2009): Hydrocephalus and its treatment according to Rhazes. *J Neurosurg Pediatr.* 3 :161-65. A description of the various rational and irrational treatments found in the writings of Rhazes.

Aciduman A, Arda B, Ozaktürk FG, Telatar UF (2009): What does Al-Qanun Fi Al-Tibb (the Canon of Medicine) say on head injuries? *Neurosurg Rev* 32: 255-63. Ibn Sina

possessed a very systematic knowledge on head traumas and this along with his observations and experiences made him a real successor of Galen and Paul of Aegina.

#Aygen G, Karasu A, Ofluoglu AE, Pait G, Toplamaoglu H (2009): The first Anatolian contribution to treatment of sciatica by Serefeddin Sabuncuoglu in the 15th century. *Surg Neurol* 71: 130-33

Serefeddin Sabuncuoglu was an early 15th century surgeon in Anatolia. His masterpiece entitled *Cerrahiyetül Haniye* (Imperial Surgery) is the first illustrated surgical textbook in the Turkish Islamic literature of Ottoman-era Anatolia and covers the treatment of more than 40 illnesses ranging from hydrocephalus to sciatica.

Baxendale S (2008): The intriguing case of Christina the Astonishing. *Neurology* 70: 2004-7. An account of the probable temporal lobe epilepsy of Christina the Astonishing (1150-1224) whose seizures were, at the time, attributed to demonic forces and welcomed by Christina on the understanding that enduring the torments paid for respite for souls in purgatory

de Frutos-González V, Guerrero-Peral AL (2009): neurology in medieval medical poetry in Latin. *Rev Neurol*. 48:540-4. Mediaeval medical works in Latin offer an interesting insight into the way neurological diseases were viewed by western physicians in the Middle Ages, as well as describing the remedies that were employed at that time to treat them. Most of these involved the use of plants that were considered to have medicinal properties. (In Spanish)

Di Ieva, Tschabitscher M, Prada F, et al. (2007): The neuroanatomical plates of Guido da Vigevano. *Neurosurgical Focus* 23: E15. da Vigevano was an Italian physician and engineer in the 13th and 14th centuries. He was the first scientist who used pictures to illustrate his anatomical descriptions, developing for the first time a close relationship between anatomical studies and artistic drawings.

Elliot, P (2008): 'More Subtle than the Electric Aura': Georgian Medical electricity, the spirit of animation and the Development of Erasmus Darwin's Psychophysiology. *Medical History* 52: 195-220. By using a case study of Darwinian medical practice Elliot shows that the use of medical electricity was strongly influenced by natural philosophy and, in turn, medical applications played an important role in the development of psychophysiology

Gonzalez-Hernandez A, Dominguez-Rodriguez MV (2008): Migraine in Gilbertus anglicus' *Compendium medicinae*. The Cases of [MS Sloane 3486 and Wellcome MS 537. *J.Hist.Neurosci.* 17: 147-159. An analysis of how copyists reduced the long theoretical discussion of migraine made by Gilbertus Anglicus (c.1180-1245 CE) to a text usable by non-university-trained individuals. [DOI: 10.1080/09647040601107598]

Kheirandish E (2009): Footprints of 'Experiment' in Early Arabic Optics. *Early Science and Medicine* 14: 79-104. Starting with an examination of the *Book on Optics and Burning Mirrors* by Ahmad ibn 'Isa (c.864 CE) the paper argues that close analysis of the texts suggests that Islamic scholarship was not confined to book-learning but that 'footprints' of experiment can be discerned.

Manjila S, Rengachary SS, Xavier AR, Guthikonda M (2009) The departmental chair in Western Medicine: tale of the first and foremost. Historical vignette. *J Neurosurg* 111: 1102-1106 [DOI: 10.3171/2008.6.JNS08106]. Exploring the origins of the term through the biography of the medieval anatomist Mondini

Pearce JM (2008): Leopold Auenbrugger: camphor-induced epilepsy - remedy for manic psychosis. *Eur. Neurol.*59: 105-7. Auenbrugger (1722-1807) invented the art of diagnostic percussion (including the skull) and this paper provides a brief biographical sketch and recalls his use of camphor to induce epileptic fits, which were considered a remedy for psychosis

Rengachary SS, Colen C, Dass K, Guthikonda M (2009): Development of anatomic science in the late middle ages: the roles played by Mondino de Liuzzi and Guido da Vigevano. *Neurosurgery* 65: 787-93; discussion 793-4. [DOI: 10.1227/01.NEU.0000324991.45949.E4]. The contributions of these two anatomists of the late middle ages paved the way for Vesalius and should not be forgotten.

Sabra AI (2007): The 'Commentary' That Saved the Text. The Hazardous Journey of Ibn al-Haytham's Arabic *Optics*. *Early Science and Medicine* 12: 117-33. al-Haytham's *Optics* was written in the first half of the 11th century and Kamal al-Din al-Farisi's *Commentary* was composed in the second half of the 13th century and this paper discusses their transmission within the Islamic Arabic and Persian worlds.

Safavi-Abbasi S, Brasiliense LBC, Workman RK, Talley MC, Feiz-Erfan I, Theodore N, Spetzler RF, Mark C. Preul MC (2007): The fate of medical knowledge and the neurosciences during the time of Genghis Khan and the Mongolian Empire. *Neurosurgical Focus* 23: E13. After the initial shock of destruction by an unknown barbaric tribe, almost every country conquered by the Mongols was transformed by a rise in cultural communication, expanded trade, and advances in civilization. Medicine, including techniques related to surgery and neurological surgery, became one of the many areas of life and culture that the Mongolian Empire influenced.

*Shoja MM, Tubbs RS, Ardalani MR, Loukas M, Eknayan G, Salter EG, Oakes WJ (2007): Anatomy of the cranial nerves in medieval Persian literature: Esmail Jorjani (AD 1042-1137) and The treasure of the Khwarazm shah. *Neurosurgery* 61: 1325-30. Jorjani's comprehensive medical text, *The Treasure of the Khwarazm Shah*, is considered the oldest Persian medical encyclopaedia. This paper provides a translation and assessment of his detailed accounts of the cranial nerves and a review of Jorjani's life and times.

Shoja, MM, Tubbs RS, Loukas M, Shokouli G, Ardalani, MS (2009): Facial palsy and its management in the Kitab al-Hawi of Rhazes. *Neurosurg.* 64: 1188-90. A description of Bell's palsy a millennium prior to Bell. The contributions of Persian scholars to the history of medicine are all-too-briefly reviewed.

Tubbs RS, Shoja MM, Loukas M, Oakes WJ (2007): Abubakr Muhammaed Ibn Zakaria Razi, Rhazes (865-925) *Childs Nerv.Syst.* 23: 1225-6. Rhazes (865-925) was born in Ray, a city just south of modern Tehran wrote more than 200 books including the Kitab al-Mansouri and the encyclopaedic Kitab al-Hawi but died a blind pauper and this short paper reviews his contributions to neuroanatomy and neurology.

Tubbs RS, Loukas M, Shoja MM, Ardalani M, Oakes WJ (2008): Ibn Jazlah and his 11th century accounts (Taqwim al-abdan fi tadbir al-insan) of disease of the brain and spinal cord. Historical vignette. *J Neurosurg Spine* 9: 314-7. A well-illustrated review of the life and times of this 11th century Muslim physician who made many important observations on the diseases of brain and spinal cord.

#Turgut M (2007): Illustrations of neurosurgical techniques in early period of Ottoman Empire by Serefeddin Sabuncuoğlu. *Acta Neurochir (Wien)*. 149:1063-9; discussion 1069. Serefeddin Sabuncuoglu (1385-1468) was the author of the first illustrated surgical atlas, the *Cerrahiyyetü'l Haniyye* (Imperial Surgery), written (in Turkish) in 1465. It consists of 412 pages detailing many surgical techniques, including many in neurosurgery, and this well-illustrated article reviews his seminal contribution.

Turgut M (2008): Serefeddin Sabuncuoğlu (1385-1468) on pediatric skull fractures. Historical vignette. *Pediatr. Neurosurg*. 44: 264-8. A discussion of the work of the Turkish surgeon who published the first Turkish surgical textbook with particular reference to his surgical techniques and instruments for the treatment of pediatric head injury

Turgut M (2008): Pediatric neurosurgical techniques in the 15th century. *J Clin Neurosci*. 15:1085-90. A discussion of the work of Serefeddin Sabuncuoglu (1385-1468) on neurosurgery especially pediatric neurosurgery, where he is nowadays recognised as a pioneer

Turgut M (2009): Surgical scalpel used in the treatment of "infantile hydrocephalus" by Al Zahrawi (936-1013 A.D.) *Child's Nerv Syst*. 25:1043-4. [DOI: 10.1007/s00381-008-0773-7]. A short account of the surgeon known to the West as Abulcasis or Abukasis who first used surgical evacuation of superficial intracranial fluid to treat hydrocephalic children and was the first medical author to provide illustrations of his surgical instruments (reproduced in this article).

Wujastyk D (2007): A Persian Anatomical Image in a non-Muslim Manuscript from Gujarat. *Med.Hist*. 51: 237-42. A Persian manuscript entitled *Tasrih-i Mansuri* from 1396 provides six or seven anatomical drawings which influenced Indian anatomical illustrations in the eighteenth century; cerebral anatomy is missing and medieval 'cell' psychophysiology is not shown

Renaissance (1450-1700 CE)

Aciduman A, Belen D (2007): The earliest document regarding the history of cranioplasty from the Ottoman era. *Surg. Neurol*. 68: 349-52. A nicely illustrated account of a text written by surgeon Ibrahim bin Abdullah in 1505 detailing the earliest use of xenografts in cranial bone defects

Bataille B, Wager M, Lapierre F, Goujon JM, Buffenoir K, Rigoard P (2007): The significance of the rete mirabile in Vesalius's work: an example of the dangers of inductive inference in medicine. *Neurosurgery* 60: 761-8. An examination of the significance of the *rete mirabile* in Vesalius's work (absent in humans, present in sheep) including first hand dissections of the sheep's brain, translation of the commentaries to figures 16 and 17 of the seventh book of the *Fabrica* concluding with some lessons for contemporary medical research

Belen D, Bolay H (2009): Averroës in 'The school of Athens': a Renaissance man and his contribution to Western thought and neuroscience. *Neurosurgery*. 64:374-81; discussion 381. A discussion of Averroës' works and his contribution to neuroscience in the context of art. Introduced by his depiction in Raphael's masterwork 'The School of Athens'.

Choudhari KA, Sharma D, Leyon JJ (2008): Thomas Willis of the "circle of Willis".. *Neurosurgery* 63: 1185-90; discussion 1190-1. A biography of the 'medical genius' emphasising his academic achievements, with an attempt to gain insight into his visionary thought

Collice M, Collice R, Riva A (2008): Who discovered the Sylvian fissure? *Neurosurgery* 63:623-8; discussion 238. A discussion of the tangled history of the discovery and naming of the Sylvian fissure with an account of the discovery and history of the magnificent coloured plates in Fabricius' *Tabulae Pictae* (1600) where it is perfectly represented.

Di Ieva A, Tschabitscher M, Rodriguez y Baena R (2007): Lancisi's nerves and the seat of the soul. *Neurosurgery* 60: 563-8. The medial longitudinal striae of the corpus callosum were first described by Giovanni Maria Lancisi (1654-1720), personal physician to three Popes, and this essay describes his era, his philosophical background, and a description of the anatomical structures that bear his name.

*Fontoura P. (2009): Neurological practice in the Centuria of Amatus Lusitanus. *Brain* 132: 296-308. Amatus Lusitanus, a Portuguese Jew living in XVI century Europe, was among the first to recognize the importance of the brain parenchyma in cognition. The number of neurological and neurosurgical observations is amazing.

Fishman RS (2008): The study of the wonderful: the first topographical mapping of vision in the brain. *Arch Ophthalmol.* 126:1767-73. A review of the influence exerted by Kepler on Descartes' brain science

García-Albea Ristol E, García-Albea Martín J (2009): The beginnings of neuroscience in Spain. 'Neural circulation' in the work of the illustrious novator Martín Martínez (1684-1734). *Rev Neurol.* 49: 95-9. An account of early 17th century Spanish neuroscience which summarises the elements that go to make up Martinez' theory of 'neural' or 'spirituous' circulation (In Spanish)

Grzbowski A, Aydin P (2007): Edme Mariotte (1620-1684): Pioneer of Neurophysiology. *Surv.Ophthalmol.* 52: 443-451. Mariotte made many significant discoveries in a spectrum of sciences and corresponded with many of the great scientists of his time. Although he falsely concluded that the blind spot (Mariotte's spot) was in the choroid rather than the retina he may nevertheless be considered a forerunner in experimental neuro-ophthalmology.

#Ginn, SR, Lorusso, L (2008): Brain, Mind and Body: Interactions with Art in Renaissance Italy. *J.Hist.Neurosci.* 17: 295-313. Beautifully illustrated account of the cross-fertilisation of art and science during the European Renaissance. [DOI: 10.1080/09647040701575900]

Hatfield G (2007): The Passions of the Soul and Descartes' machine psychology. *Stud.Hist.Phil.Sci* 38: 1-35. A detailed examination of Descartes' neuropsychology in comparison with that of St Thomas Aquinas

Lopez-Munoz F, Alamo C, Garcia-Garcia P (2008): The mad and the demented in the literary works of Cervantes: on Cervantes' sources of medical information about neuropsychiatry. *Rev. Neurol.* 46: 489-501 Four sixteenth-century medical works are identified as the probable sources for Cervantes depiction of the madman or lunatic.

MacDonald PS (2007): Francis Bacon's Behavioural Psychology. *J.Hist.Behav.Scis XLIII*: 285-303. Francis Bacon (1561-1626) offered two accounts of the nature of the human mind: a medico-physical account and (less well-known) a form of behavioural psychology and this paper attempts to show how the two can be integrated.

Meli, DB (2008): The collaboration between anatomists and mathematicians in the mid-seventeenth century with a study of images as experiments and Galileo's role in Steno's mycology. *Early Science and Medicine 13*: 665-709. This article reviews the interaction between many mathematicians and anatomists and focuses on Steno's *Myology*, showing how his collaboration with the mathematician Viviani led to a geometric treatment of muscle contraction.

Ozturk S (2009): Leonardo Da Vinci (1452-1519) as a stroke victim: hemiparesis: a result of a vegetarian diet? *J.Med.Biogr. 17*: 7. A brief account suggesting that Leonardo's right hemiparesis (in the last five years of his life) might have been due to increased homocysteine levels following a prolonged vegetarian diet.

Palussi, A, Belli, A, Bain, P, Viva, L. (2007): Brain 'imaging' in the Renaissance. *J.R..Soc.Med. 100*: 540-543. A discussion of the cerebral symbolism hidden in three Renaissance paintings: Sanzio's *Transfiguration of Christ* (1517-20); Gerard David's *Transfiguration of Christ* (?1511) and Michelangelo's *Creation of Adam* (1508-12).

Piccolino M, Wade NJ (2008): Galileo Galilei's vision of the senses. *Trends Neurosci. 31*:585-90. Epub 2008 Oct 8. It is argued that that the conceptual basis of contemporary approaches to sensory function had been recognized four centuries ago by Galileo Galilei.

* Pranghofer A (1990): 'It could be Seen more Clearly in Unreasonable Animals than in Humans': The Representation of the Rete Mirabile in Early Modern Anatomy. *Medical History 53*: 561-586. A well-illustrated account of the historical rise and fall of the rete mirabile centering on sixteenth- and seventeenth -century controversies

Rengachary SS, Xavier A, Manjila S, Smerdon U, Parker B, Hadwan S, Guthikonda M. (2008): The legendary contributions of Thomas Willis (1621-1675): the arterial circle and beyond. *J Neurosurg. 109*:765-75.. An account of the life and work of Thomas Willis emphasising that he not only coined the word 'neurology' and gave his name to the arterial circle but also contributed to many related anatomical fields, disease entities, pathology and comparative anatomy

Rengachary SS, Xavier A, Manjilia S, Guthikonda M (2009): Human resuscitation in the 17th century: an interesting case report. *Surg Neurol 71*: 408-410. An account of a quite unknown 'failed hanging' and Thomas Willis' involvement.

Riva A (2007): G.F.d'Acquapendente tabulae pictae on the nervous system. *J.Headache Pain 8*: 253-6.

Sakuta, M (2009): One hundred books which built up neurology (34)--John Browne "A compleat treatise of the muscles" (1681)]. *Brain Nerve 61*: 1192-3 (In Japanese)

Schott GD (2008): Piero della Francesca's projections and neuroimaging today. *Lancet*. 372 :1378-9. A fascinating paper showing how Piero della Francesca (c.1412-92) developed artistic devices to show the head, using projections which are still used by neuroscientists to illustrate the brain 600 years later

Tubbs RS, Loukas M, Shoja MM, et al. (2008): Costanzo Varolio (Constantius Variolus 1543-1575) and the pons varolli. *Neurosurgery* 62:734-37. A brief biography of its subject.

Tubbs RS, Linganna S, Loukas M (2008): Matteo Realdo Colombo (c. 1516-1559): the anatomist and surgeon. *Am. Surg.* 74: 84-6. An account of the great anatomist's life with reflections on the evolving notions of 'truth' in science

Turgut M (2009): Semseddin-i Itaki's contributions to neuroanatomy and embryology in the seventeenth century. *Child's Nerv Syst.* 24:1281-2. Semseddin-i Itaki (1570-1640) wrote an anatomy text in 1632, *Tesrih-i-Ebdan* (Anatomy of the Body), of which seven hand-written copies remain, containing many original descriptions of the central and peripheral nervous systems. This short paper provides an introduction and bibliography

Vinchon M (2009): Ambroise Paré, surgery, and obstetrics. *Child's Nerv Syst.* 25: 639-40 [DOI: 10.1007/s00381-008-0775-5]. A brief account of Paré (c.1510 - 1590) with a portrait, emphasising that he was not only one of the founders of modern surgery but also played a significant role in the origins of obstetrics

Wade NJ (2007): Galileo and the senses, vision and the art of deception. *Galilaeana* 4: 259-88. Examines Galileo's analyses of the mechanical senses in contrast to vision. Galileo can be said to have anticipated approaches to sensory mechanisms that are associated with modern studies. Despite his contacts with Kepler and Scheiner, Galileo did not apply these concepts to the analysis of vision.

Wade NJ (2009): Galileo's vision. *Cortex* 45: 793-4. [DOI:10.1016/j.cortex.2009.01.010]. Lauded by Sergio Della Sala in this issue of *Cortex* as an 'honorary neuroscientist' this article shows that Galileo concerned himself not only with astronomical observation, but also with the way in which the senses, especially vision, interpreted the world 'outside'.

Wübben Y (2009): Transhumane Physiologie. Bilder und Praktiken des Reflexes (Thomas Willis, Robert Whytt, Marshall Hall). *Early Modern Science and Medicine* 15: 105-121. An examination of the function of visualisations and practices in the formation of the reflex concept with an argument suggesting that it is through such practices and visualisations that technical knowledge is transferred from animal to human reflex physiology (In German)

Yaldir H (2009): Ibn Sînâ (Avicenna) and René Descartes on the Faculty of the Imagination. *Brit.J.Hist.Phil* 17: 2247-78. A discussion of the similarity in and differences between the neurophilosophies of Avicenna and René Descartes with special reference to the faculty of imagination and the interaction of body and soul.

Zago S, Meraviglia MV (2009): Costanzo Varolio (1543-1575). *J Neurol.* 256:1195-6.[DOI: 10.1007/s00415-009-5192-5]. Varolio's name is usually linked with the bridge (pons) which bears his name but he also contributed several other neuroanatomical descriptions in the 16th century and this article reviews his life and work.

Eighteenth Century

Ashoori A, Jankovic J (2007): Mozart's movements and behaviour: a case of Tourette's syndrome? *J.Neurol.Neurosurg.Psychiatry* 78: 1171-75. The 250th anniversary of Mozart's (1756-1791) birth provides an opportunity to assess his neurology and this comprehensive paper concludes that if he did suffer from any neurological disorder he was able to compensate well.

Baumann C (2008): Kant and the Magnitude of Sensation: A Neglected Prologue to Modern Psychophysics. *J.Hist.Neurosci.* 17: 1-7. A discussion of the neglected part of Kant's work which deals with the magnitude of sensations and anticipates essential elements of modern psychophysics. [DOI: 10.1080/09647040600757401]

Bolwig TG, Fink M (2009): Electrotherapy for melancholia: the pioneering contributions of Benjamin Franklin and Giovanni Aldini. *J. ECT* 25: 15-18. The early experiments of Franklin and Aldini are described demonstrating that the newly-discovered electrical force suggested hopeful applications in medicine.

Boury D (2008): Irritability and sensibility: Key concepts in assessing the medical doctrines of Haller and Bordeu. *Science in Context* 21: 521-35. This article discusses the various concepts of irritability and sensibility current in the mid-18th century; it is argued that Haller's experimental approach led to an autonomous science of physiology, whilst that of Chambaud and Bordeu formed the bases of clinical medicine.

Bresadola M (2008): Animal Electricity at the End of the Eighteenth Century: The many facets of a Great Scientific Controversy. *J.Hist.Neurosci.* 17: 8-32. An account of the famous controversy based on a discussion of the scientific issues central to Gallvani's and volta's research and its 18th century background. [DOI: 10.1080/09647040600764787]

Cajavilca C, Varon J, Sternbach GL (2009): Resuscitation great Luigi Galvani and the foundations of electrophysiology. *Resuscitation* 80:159-62. Epub 2008 Dec 6.. An account of the Galvani/Volta debate on animal electricity, Galvani's eclipse and subsequent resurrection

Dan NG (2008): Neurosurgery and the first fleet. *J. Clin. Neurosci.* 15: 111-3. Several neurosurgical events occurred during the voyage of the First Fleet from England to Australia in 1787-1788. The early records also describe a number of head injuries during the first years of European settlement in Australia.

De Asua, M (2008): The Experiments of Ramon M Termeyer SJ on the Electric Eel in the River Plate Region (c.1760) and other Early Accounts of *Electrophorus electricus*. *J.Hist.Neurosci.* 17: 160-174. A discussion of the work of Termeyer (1737-1814?) in the River Plate region on *Electrophorus electricus* and of that of some of his contemporaries and co—workers. [DOI: 10.1080/09647040601070325]

Di Ieva A, Yaşargil MG (2008): Liquor cotunnii: the history of cerebrospinal fluid in Domenico Cotugno's work. *Neurosurgery* 63: 352-8; discussion 358. Cotugno (1736-1822) is known for his work on the anatomy of the inner ear, on the pathophysiology of sciatica and for

meticulous dissections which established the presence of CSF not only in the brain's ventricles but also in the spine and subarachnoid spaces – hence CSF is also known as liquor cotunnii.

Elliot, P (2008): 'More Subtle than the Electric Aura': Georgian Medical electricity, the spirit of animation and the Development of Erasmus Darwin's Psychophysiology. *Medical History* 52: 195-220. By using a case study of Darwinian medical practice Elliot shows that the use of medical electricity was strongly influenced by natural philosophy and, in turn, medical applications played an important role in the development of psychophysiology

Finger S (2009): Edward Bancroft's 'Torporific Eels'. *Perspectives in Biology and Medicine* 52: 61-79. Edward Bancroft's 1769 *Essay* detailed experiments on South American eels which suggested that their torporific powers were electrical thus making an early case for animal electricity and stimulating the work of John Walsh in the 1770s.

#Finger S, Ferguson I (2009): The Role of *The Gentleman's Magazine* in the Dissemination of Knowledge about Electric fish in the Eighteenth Century. *J.Hist.Neurosci.* 18.: 347-65. An well-illustrated account of how contributions to The Gentleman's Magazine led to a widespread interest in electric fish amongst both scientists and the general reading public.

Giglioni G (2008): What ever happened to Francis Glisson? Albrecht Haller and the fate of eighteenth-century irritability. *Science in Context* 21: 465-93. An investigation of the reasons behind the disappearance of Glisson's theory of irritability during the 18th century; it is argued that this was due to objections to his mind/matter metaphysics and that Haller played a key role in the process.

Gordon AG (2007): Erasmus Darwin (1731-1802): neurologist. *Neurology* 16: 1239-40. A brief exchange of correspondence on Erasmus Darwin's neurology

#Karenberg, A (2009): Cerebral Localisation in the Eighteenth Century – An Overview. *J.Hist.Neurosci.* 18: 248-53 [DOI: 10.1080/09647040802026027]. A reconstruction of the era's principle arguments and experiments demonstrating that many twenty-first century controversies over the mind-brain problem are re-runs of eighteenth-century neurophilosophical debates

*Koehler PJ, Finger S, Piccolino M (2009): The 'Eels' of South America: Mid-18th-Century Dutch Contributions to the Theory of Animal Electricity, *J.Hist.Biol.* 42: 715-763 [DOI: 10.1007/s10739-009-9186-z]. A comprehensive account of the dawning understanding of 'animal electricity' derived from study of the electric eels found in the rivers of Dutch colonies in the South America. The article is based on the early documents of Dutch colonists.

Pearce LMS (2007): Gehardi van Swieten: descriptions of episodic cluster headache. *J.Neurol.Neurosurg.Psychiatry* 78: 1248-9. A short account of van Swieten's (1700-72) career and of his commentary on Boerhaave which contains, according to some authorities, the first description of cluster headache.

Pearce JM (2008): Leopold Auenbrugger: camphor-induced epilepsy - remedy for manic psychosis. *Eur. Neurol.*59: 105-7. Auenbrugger (1722-1807) invented the art of diagnostic percussion (including the skull) and this paper provides a brief biographical sketch and recalls his use of camphor to induce epileptic fits, which were considered a remedy for psychosis

Piccolino M (2008): Visual Images in Luigi Galvani's Path to Animal Electricity. *J. Hist. Neurosci.* 17: 335-348. The scientific endeavour that led Galvani to the idea of 'animal electricity' is reviewed with particular reference to the images used. [DOI: 10.1080/09647040701420198]

Renner C (2007): Naissance de l'électricité médicale. *Histoire des Sciences Medicales* 41: 353-8. A nicely illustrated resumé of the introduction of electricity into French medicine during the 18th century

Rocha L (2007): Pedro de Horta and the first book of epilepsy from Latin America. http://www.ibro.info/Pub_Main_Display.asp?Main_ID=5. A nicely illustrated account of the treatise published by Pedro de Horta in 1763 that describes the signs and symptoms of the severe convulsions suffered by 15 nuns in a convent 150 kms east of Mexico City in the early 1750

Sarikcioglu L, Ozsoy U, Unver G (2007): Tapetum Corporis Callosi: Carpet of the Brain. *J. Hist. Neurosci.* 16: 432-4. Johann Christian Reil (1759-1813) described the tapetum in 1796 and this short paper discusses the term 'tapetum' from etymological and anatomical points of view.

#Schutta HS (2009): Morgagni on Apoplexy in De Sedibus: A Historical Perspective. *J. Hist. Neurosci.* 18: 1-24. A detailed examination of Morgagni's (1682-1771) case reports on apoplexy and paralysis which concludes that his reports impeded rather than, as is generally believed, assisted in understanding the conditions.

Sotos JG (2009): Abraham Lincoln did not have type 5 spinocerebellar ataxia. *Neurology.* 73: 1328-32. There is no genetic evidence that Lincoln suffered from type 5 spinocerebellar ataxia.

Smith PEM, Chitty CN, Williams G, Stephens D (2008): Goya's deafness. *Pract. Neurol.* 8, 370-77. Francisco Goya (1746-1828) became profoundly deaf at the age of 46 in 1792 and this paper discusses his symptoms (so far as they are known) and concludes that his condition was due to either Susac's or Cogan's syndrome

Steigerwald J (2008): Figuring Nature: Ritter's galvanic inscriptions. *Bull. Hist. Épistém. Sci. Vie* 15: 137-146. Johann Wilhelm Ritter (1776-1810) worked under the supervision of Alexander von Humboldt at Jena in the late 18th century to develop an understanding of galvanism using frogs and himself as experimental subjects and elaborated intricate diagrams to account for his results – evolving an 'instrumental language' which fascinated and influenced his friend, Novalis.

* Tubbs RS, Lovkas H, Hill M, Shoja M, Cohen-Gadol AA (2009) Richard Lower (1631-1691) acknowledging his notable contributions to the exploration of the nervous system. *J Neurosurg* 111: 1096-1101. [DOI: 10.3171/2008.11.JNS081329]. **Some of the findings of Thomas Willis should be attributed to this important physician and researcher who has been unjustly overshadowed by his greater contemporary.**

van Gijn J (2009): Félix Vicq d'Azyr (1748-1794). *J. Neurol.* 256: 1384-5 [DOI: 10.1007/s00415-009-5211-6]. Physician, anatomist, medical historian and social reformer, Vicq d'Azyr is best-known for his major work, *Traité d'anatomie et de physiologie* (1786), which contains a major section on brain anatomy illustrated with many aquatint plates.

Nineteenth Century

Ambrosius W, Michalak S. (2009): Joseph Babinski--French neurologist of Polish descent. *Eur J Neurol.* 16: e44. Epub 2008 Dec 9. Letter to editor

Anderson J, Peace D, Okun MS. (2008): Albert Sidney Johnston's sciatic duelling injury did not contribute to his death at the Battle of Shiloh. *Neurosurgery.* 63: 1192-7; discussion 1197. An analysis of the evidence shows that General Albert Sydney Johnston's 1837 dueling wound did not contribute to his death in 1862 on the Shiloh battlefield.

Barbara J-G (2007): Louis Ranvier (1835-1922): The Contribution of Microscopy to Physiology and the Renewal of French General Anatomy. *J.Hist.Neurosci.* 16:413-31. Ranvier's contribution to the development of French histology and *anatomie gènèrale* are analysed and he is re-assessed as a major figure in the renewal of French anatomy.

Bladin PF (2008): Julius Althaus (1833--1900). Neurologist and cultural polymath; founder of Maida Vale Hospital. *J. Clin. Neurosci.* 15:495-501. Born, educated and trained in Germany Althaus migrated to London at the start of his neurological career and played a major role in establishing the Maida Vale hospital for nervous diseases and left a legacy of both culture and neurology for his adopted country.

Bloomstedt P, Olivecrona M, Sailor A, Hariz MI (2007): Dittmar and the history of stereotaxy; or rabbits, rats and references. *Neurosurgery* 60: 198-201. Reference to Dittmar's original paper, usually regarded as originating stereotaxy, shows that many of the subsequent investigators who cited this paper had clearly not actually read it.

Bogousslavsky J (2007): Memory after Charcot: Paul Sollier's visionary work. *J.Neurol.Neurosurg.Psychiatry* 78: 1373-4. Paul Sollier (1861-1938) was regarded by Léon Daudet as one of Charcot's cleverest pupils but his work on memory has been largely overlooked as it fell between neurology and psychiatry and he is now remembered (if at all) as Marcel Proust's neurologist. This paper argues that it is now time to rehabilitate him and his work.

Binder DK, Schaller K, Clusmann H (2007): The seminal contributions of Johann-Christian Reil to anatomy, physiology, and psychiatry. *Neurosurgery* 61 (5):1091-1096. Many anatomical features are named for this prominent German physician (1759-1813), who coined the term "psychiatry" in 1808 and was physician to Goethe.

Brand, RA ,ed. (2007): S.W Mitchell, G.R.Morehouse , W.W.Keen: *Gunshot wounds and other injuries of nerves*, 1864. *Clin. Orthop.Relat. Res* 458: 35-9. Gunshot wounds in the American Civil War and their treatment by ill-educated surgeons

Brau C, Brau RH (2008): Babinski's signe de l'eventail: a turning point in the history of neurology. *P. R. Health Sci. J.* 27:103-5. Although the Babinski sign had been observed as early as 1784, Babinski's report in 1896 was not only responsible for suggesting the significance of the sign but also for transforming the role which physical diagnosis plays in modern medicine and this paper reviews the history.

Buckingham HW (2008): Walter Moxon, MD, FRCP (1836-1886): The Cerebro-Vascular System and the Syndrome of ‘Congestion of the Brain’: An Analysis of His 1881 Croonian Lectures. *J.Hist.Neurosci.* 17: 100-108. This paper traces Moxon’s contributions to the localisation of speech to the left hemisphere and to the nineteenth century concept of brain ‘congestion’. [DOI: 10.1080/09647040600971697]

Carlson C, Devinsky O (2009): The excitable cerebral cortex Fritsch G, Hitzig E. Uber die elektrische Erregbarkeit des Grosshirns. *Arch Anat Physiol Wissen* 1870;37:300-32. *Epilepsy Behav.* 15:131-2. Epub 2009 Mar 6. An account of Fritsch and Hitzig’s pioneering paper on the mammalian cerebral cortex

Chico-Ponce de León F (2009): History of cranial surgery, cerebral tumor surgery and epilepsy surgery in Mexico. *Neurocirugia (Astur)*. 20: 388-99: An account of the first cases of epilepsy surgery in the Spanish-speaking world in the late 19th century. (In Spanish)

Ciric IS (2009): The morning visit by Oliver Wendell Holmes, Sr., M.D. *Neurosurgery* 65: 666-8; discussion 668-9. [DOI 10.1227/01.NEU.0000351280.04013.65]. A reprint and discussion of Holmes’ poem

Clarac F, Massion J, Smith AM (2009): Duchenne, Charcot and Babinski, three neurologists of La Salpêtrière Hospital, and their contribution to concepts of the central organization of motor synergy. *J Physiol Paris* 103: 361-76. This review traces some current ideas about motor control back to the ideas of three French neurologists of the Salpêtrière hospital in Paris during the latter half of the 19th and early 20th century.

Compston DAS (2007): Four papers by John Hughlings Jackson. *Brain* 130: 1712-14. A review of four papers on epilepsy submitted to *Brain* in the 1880s.

Compston A (2009): Was Charles Darwin interested in the brain? *Brain*. 132: 3191-2. [DOI:10.1093/brain/awp302]. In this short editorial Compston asks ‘Have we got the wrong Darwin?’ suggesting that grandfather, Erasmus, was far more interested in the brain and neurology.

Cubelli R, Zago S (2007): Antonio Berti, Giovanni Brugnoli and the first studies on aphasia in Italy. *Cortex*.43:1032-5. This editorial describes the reception in Italy of left-hemisphere localisation of speech by Antonio Berti (1812-79) and Giovanni Brugnoli (1814-1894) with short biographies of the scientific careers of these two Italian physicians.

De Rijke S (2008): Light Tries the Expert Eye: The Introduction of Photography in Nineteenth-Century Macroscopic Neuroanatomy. *J.Hist.Neurosci.* 17: 349-366. Photography in neuroscience was slow to take hold and this paper asks ‘why?’ and reviews the early history. [DOI: 10,1080/09647040701593788}

Eadie MJ (2007): The neurological legacy of John Russell Reynolds (1828-1896). *J.Clin.Neurosci.* 14: 309-16. Reynolds was the protégé of Marshall Hall, held Presidencies of the Royal College of Physicians and of the British Medical Association, and linked the emerging neurology of the first half of the nineteenth century to its florescence in the 1860s and thereafter.

Eadie MJ (2007): Rigor mortis and the epileptology of Charles Bland Radcliffe (1822-1889). *J.Clin.Neurosci.* 14: 201-7. Radcliffe carried out many experiments on the frog myoneural

system in the mid-nineteenth century in an attempt to understand rigor mortis and developed a theory that muscle contraction was due to the cessation of nerve input which, although comprehensively wrong, nevertheless helped Hughlings Jackson to establish his ideas about the central disinhibitions which occur in certain epileptic events.

Eadie MJ (2008): Samuel Wilks (1824-1911): neurologist and generalist of the Mid-Victorian Era. *J Med Biogr.* 16: 215-20. Wilks recognised in 1866 that epileptogenesis occurred in the cerebral cortex and went on to demonstrate the antiepileptogenic properties of potassium bromide and provided possibly the first account alcoholic peripheral neuritis

#Eadie MJ (2009): The Role of Focal Epilepsy in the Development of Jacksonian Localisation. *J.Hist.Neurosci.* 18: 262-82. A detailed account of Jackson's work on the localisation of epileptic seizures.

Eling P (2008): Cerebral Localization on the Netherlands in the Nineteenth Century: Emphasising the Work of Aletta Jacobs. *J.Hist.Neurosci.* 17: 175-194. An overview of ideas on cerebral localisation in the Netherlands during the 19th century with special reference to Aletta J)acobs (1854-1929) [DOI: 10.1080/09647040701262061]

Fusar-Poli P, Howes O, Borgwardt S. (2009): Johann Cristian Reil on the 200th anniversary of the first description of the insula (1809). *J Neurol Neurosurg Psychiatry.* 80:1409 [DOI:10.1136/jnnp.2009.185884]. In addition to providing the first description of the insular cortex (insula), Reil also contributed much to late 18th century psychiatry and this article reviews his life and work.

Garcia-Lopez P, Garcia-Marin V, Friere M (2007): 'The discovery of dendritic spines by Cajal in 1888 and its relevance to present neuroscience. *Progr.Neurobiol.* 83: 110-30.. An account of the main contributions of Cajal and other contemporary scientists on dendritic spines with high quality images of Cajal's original preparations and drawings.

Goetz CG (2007): J-M. Charcot and simulated neurologic disease: attitudes and diagnostic strategies. *Neurology* 69: 103-9. Charcot is shown to have developed an academically professional approach to the assessment of malingering and his diagnostic techniques anticipate in many ways contemporary methods.

Goetz CG, Harter DH (2009): Charcot and Pasteur: Intersecting Orbits in *Fin de Siècle* French Medicine. *J.Hist.Neurosci.* 18: 378-86. An analysis of source documents shows that there was little communication between Pasteur and Charcot: they represent two types of late nineteenth-century French medicine: the medical scientists and the scientific physician.

Goetz CG (2009): Jean-Martin Charcot and his vibratory chair for Parkinson disease. *Neurology* 73:475-8. This study analyzes printed writings by Charcot and others on vibratory therapy and discusses unpublished notes from the Salpêtrière Hospital.

Grigoriev AI, Grigorian, NA (2007): I.M.Sechenov: The Patriarch of Russian Physiology. *J.Hist.Neurosci.* 16: 19-29. Using quotations from Russian and western European sources and from his autobiography this paper describes the life and personality of Ivan Mikhailovich Sechenov (1829-1905).

Gross CG (2007): The Discovery of Motor cortex and its Background. *J.Hist.Neurosci.* 16: 320-331. A discussion of the 1870 experiment of Fritsch and Hitzig which showed that electrical stimulation of the dog's cortex elicited muscular movement together with an account of work in the preceding two centuries. [DOI: 10.1080/09647040600630160]

Grzybowski A, Kaufman MH (2007): Sir Charles Bell (1774-1842): contributions to neuro-ophthalmology. *Acta Ophthalmol.Scand.* 85: 897-901. A review of Bell's life and scientific achievements finishing with an account of his research in ophthalmology

Gupta G, Pretigiacomo CJ (2007): From sealing wax to bone wax: predecessors to Horsley's development. *Neurosurgical Focus* 23: E1. A thorough literature review suggests that the use of bone wax for cranial bone hemostasis had its roots more than 50 years before Horsley's description in 1892.

Haines DE (2007): Santiago Ramón y Cajal at Clark University, 1899; his only visit to the United States. *Brain Res.Rev.* 55: 463-80. A well-illustrated account of the events surrounding Cajal's visit to Clark University and other parts of the northeastern US: his only visit to the USA

Harris LJ, Almerigi JB (2009): Probing the human brain with stimulating electrodes: the story of Roberts Bartholow's (1874) experiment on Mary Rafferty. *Brain Cogn.* 70: 92-115. [DOI:10.1016/j.bandc.2009.01.008]. The 1874 experiment is regarded as the first of its kind and this article attempts to tell the whole story and follows this with an account of its citation record into our own times

Healy DG (2007): Did Géricault's 'Madwoman Obsessed With Gambling' have Parkinson's disease? *Mov. Disord.* 22: 1069-70. In 1822 Géricault was commissioned by the Salpêtrière to make ten paintings to illustrate the facial expressions shown by psychiatric patients and Healy suggests that the 'gambling madwoman' might have been suffering from the newly described Parkinson's disease.

Hellal P, Lorch MP (2007): The Validity of Barlow's 1887 Case of Acquired Childhood Aphasia: Case Notes Versus Published Reports. *J.Hist. Neurosci.* 16: 378-94. The discovery of the original case notes of this much-discussed case throws doubt on its interpretation in the subsequent literature

Hemseloet D, Hemseloet K, Devreese D (2008): The neurological illness of Friedrich Nietzsche. *Acta. Neurol. Belg.* 108: 9-16. At the age of 44 Nietzsche (1844-1900) suffered a mental breakdown from which he never recovered. This study reviews the various diagnoses that have been proposed and concludes that cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL) best accounts for his the symptoms

Henderson VW (2008): Alexia and agraphia: contrasting perspectives of J.-M. Charcot and J. Hughlings Jackson. *Neurology* 70: 391-400. An evaluation of 19th century concepts of cerebral localisation through the work of Charcot and Jackson on alexia and agraphia showing that their positions reflected contrasting philosophical approaches to the study of brain disorders

Horst C (2007): Heinrich Heine and syphilis. *Front.Neurol.Neurosci.* 22: 105-20. The underlying illness which confined Heine to his 'mattress grave' has never been fully clarified but an evaluation of all the evidence in its historical context suggests that his death 151 years ago was due to opium abuse.

Ijpma FF, Van De Graaf RC, Meek MF (2008): The early history of tubulation in nerve repair. *J Hand Surg Eur* 33: 581-6. The first experiments in bridging nerve gaps using nerve tubulation emerged in the 19th century and this paper reviews the work of Gluck (1853-1942), Neuber (1850-1932) and Vanlair (1839-1914).

Jacyna S (2007): The Contested Jacksonian Legacy. *J.Hist.Neurosci.* 16: 307-317. An account of how Jackson's ideas were interpreted differently by his two principle disciples – Henry Head and Kinnier Wilson. [DOI: 10.1080/09647040600615195]

Jacyna S (2009): The most important of all the organs: Darwin on the brain. *Brain* 132: 3481-7 [DOI:10.1093/brain/awp283]. The first section of this article considers the part played by what might broadly be defined as 'neurological' materials in the shaping of Darwin's theory and the following section provides a brief review of the impact that Darwin's ideas were to have upon subsequent neurological thought.

Jewanski J, Day SA, Ward J (2009): A Colorful Albino: The First Documented Case of Synaesthesia, by Georg Tobias Ludwig Sachs in 1812. *J.Hist.Neurosci.* 18: 293-303. This paper provides a translation from the Latin of Sachs' pioneering account of synaesthesia (colours for music and mathematical notation) and a discussion of its influence on later theories.

Kaufman MH (2008): William Gregory (1803-58): Professor of Chemistry at the University of Edinburgh and enthusiast for Phrenology and Mesmerism. *J.Med.Biog.* 16: 128-133. A biography of Gregory, Professor of Chemistry at Edinburgh, paying particular attention to his active role in Scottish phrenological societies and in mesmerism and mesmero-phrenology

Kempster PA, Hurwitz B, Lees AJ (2007): A new look at James Parkinson's *Essay on the Shaking Palsy*. *Neurology*, 69: 482-5. A commentary on Parkinson's 1817 *Essay* identifying important sources and his forward-looking methodology

Kempster PA, Alty JE (2008): John Ruskin's relapsing encephalopathy. *Brain*. 131: 2520-5. In middle age Ruskin (1819-1900) suffered recurring delirium with visual hallucinations and this paper discusses the causes of the symptoms and concludes that the best diagnosis is Autosomal Dominant Arteriopathy with Subcortical Infarcts and Leukoencephalopathy (CADASIL).

Kierzek A (2007): Benni, Babiński, Bouchard, Charcot. Their contribution to the development of XIX-century Polish and French medical relations. *Przeegl Lek.* 64:183-4. The personal and scientific achievements of the four physicians and their interconnections are briefly reviewed. (In Polish).

Kofler W (2007): I.M.Sechenov (1829-1905) and the Scientific Self-understanding .for Medical Sciences. *J.Hist.Neurosci.* 16: 30-41. An account of Sechenov's neurophilosophy which constitutes nearly a third of his *Selected Works*.

Kotowicz Z (2007): The strange case of Phineas Gage. *History of the Human Sciences* 20: 115-131. Kotowicz concludes, after a close examination of the evidence that there was nothing psychopathic in Gage's behaviour but that, on the contrary, it was his way of dealing with the disfigurement caused by the accident.

Kovalzon VM (2009): Some Notes on the Biography of Maria Manaseinna. *J.Hist.Neurosci.* 18: 312-19. A short scientific biography of the Russian doctor (1843-1903) who pioneered work in biochemistry and sleep research.

Lanska DJ (2008): William Hammond's contributions [Letter]. *Gunderson Lutheran Med J* 5: 3. [<http://www.gundluth.org/upload/docs/Research/LetterToEditor.pdf>]. This letter clarifies some of William Hammond's contributions, particularly in terms of his contributions to the founding of the American Neurological Association.

Larner AJ (2008): Francis Kilvert (1840-1879): An early self-report of cluster headache? *Cephalalgia* 28:763-6. A systematic search of Kilvert's diaries suggests that they may contain one of the earliest accounts of cluster headache by a patient rather than by a physician

Lazar JW (2008): An American Controversy about the Localisation of Cutaneous Sensory Regions and their Relation to Motor Regions. *J.Hist. Neurosci.* 17: 442-460. An account of the work of three American neurologists (Mills, Dana and Starr) on the motor and tactile regions of the brain showing the limits of knowledge in the late nineteenth century and the difficulty in deciding between alternatives.

Lazar JW (2009): Anglo-American Interest in Cerebral Physiology. *J.Hist.Neurosci.* 18: 304-11. This paper provides a detailed discussion of the relative of Ferrier and Hitzig on late nineteenth-century British and American cerebral physiology and argues that national sentiment played a role.

Lazar, JW (2009): Diffusion of Electrical Current in the Experiments of Fritsch and Hitzig and Ferrier Failed to Negate Their Conclusion of the Existence of Cerebral Mootor Centers. *J.Hist.Neurosci.* 18: 166-76. An exploration of the early criticism (largely from French sources) of the conclusions drawn by early localisationists citing the likelihood that the electrical stimulus diffused more widely through the cortex than they had supposed

Louis ED (2008): Weir Mitchell's 1859 demonstration of "a peculiar contraction" produced by a percussion hammer. *Neurology* 70: 969-73. It is shown that percussion stretch reflexes were well known to Weir Mitchell in 1859 several decades before the publications of Erb and Westphal, although relationships to disease was not discussed in Mitchell's report..

Louis ED, Broussolle E, Goetz CG, Krack P, Kaufmann P, Mazzoni P (2008): Historical underpinnings of the term essential tremor in the late 19th century. *Neurology* 71: 856-9. A review of late 19th and early 20th century medical literature to find the origins of the term 'essential tremor' one of the most common neurological disorders

Loukas M, Noordeh N, Shoja MM et al. (2008): Hans Chiari (1851-1916). *Childs Nerv. Syst.* 24: 407-9. An account of the scientific life of Hans Chiari whose classifications of hind-brain herniation is still widely accepted

Lucey BP, Hutchins GM (2008): Did Sir William Osler perform an autopsy at the Johns Hopkins Hospital? *Arch Pathol Lab Med.* 132: 261-4. The evidence presented in this paper suggests not

#Macmillan, M (2009): Evolution and the Neurosciences Down-Under. *J.Hist.Neurosci. 18: 150-196*. The influence of Darwinism on several important Australian neuroscientists at the end of the nineteenth century is reviewed and importance of their work in the establishment of the Darwinian theory is discussed.

Manjila S, Rengachary S, Xavier AR et al. (2008): Modern psychosurgery before Egas Moniz: a tribute to Gottlieb Burckhardt. *Neurosurg Focus 25: E9*. Burckhardt (1836-1907) is a neglected figure in the history of psychosurgery although he performed surgical procedures several decades before Egas Moniz (1874-1955) and this review sets the record straight.

Manjila S, Haroon N, Parker B, Xavier AR, Guthikonda M, Rengachary SS (2009): Albert Wojciech Adamkiewicz (1850-1921): unsung hero behind the eponymic artery. *Neurosurg Focus 26: E2*. A biography of the Polish pathologist Adamkiewicz, after whom the landmark artery is named. The authors bring to light the historical perspective of the eponymic artery and provide a recapitulation of other significant contributions made by Adamkiewicz, mostly involving the nervous system.

Mut M, Dinç G, Naden, S (2007): On the report of the first successful surgical treatment of brain abscess in the Ottoman Empire by Dr. Cemil Topuzlu in 1891. *Neurosurgery. 61: 869-72; discussion 872*. Cemil Topuzlu was the founder of modern surgery in the Ottoman empire and in 1891 was the first to successfully treat a brain abscess.

Okun MS, Koehler PJ (2007): Paul Blocq and (psychogenic) astasia abasia. *Mov Disord. 22: 1373-8*. Although it is now regarded as a conversion disorder, Blocq (1860-1896) described astasia-abasia as a separate disease and this paper partly translates his 1888 papers from French into English and reviews a selection of the subsequent literature.

Ovsyannikov SA, Ovsynannikoc AS (2007): Sergey S Korsakov and the Beginning of Russian Psychiatry. *J.Hist.Neurosci 16: 58-64*. Korsakov (1854-1900) founded the Moscow school of psychiatry, was the first to give a clear account of paranoia and a leader in humane patient management.

Owen CH, Howard A, Binder DK (2009) Hippocampus minor, calcar avis, and the Huxley- Owen debate. *Neurosurg 65: 1098-1105*. [DOI: 10.1227/01.NEU.0000359535.84445.0B]. Light is thrown upon the history of evolution theory and the backgrounds of Owen and Huxley through the debate on the neuroanatomy of the calcar avis.

Paciaroni M, Bogousslavsky J (2009): How did stroke become of interest to neurologists?: a slow 19th century saga. *Neurology 73: 724-8*. [DOI: 10.1212/WNL.0b013e318b59c1a2009]. It was not until the first half of the 19th century that the vascular nature of strokes was readily recognized and its study was triggered by the development of clinical-topographic correlation studies. These studies were promoted by Déjerine and Marie, followed by Foix, the father of modern clinical stroke research.

Paulson G (2009): Dr William Thornton's Views on Sleep, Dreams, and Resuscitation. *J.Hist.Neurosci 18: 25-40*. Thornton's views on sleep, dreams and resuscitation are reviewed as those of an educated man in the early nineteenth century.

Pearce JM (2008): Wernicke-Korsakoff encephalopathy. *Eur Neurol.* 59: 101-4. This paper summarises the salient aspects of the syndrome and discusses the contributions of Wernicke and Korsakoff and of a number of other nineteenth century investigators

Pearce JM (2008): Historical note. Richard Bright and epilepsy. *J Neurol Neurosurg Psychiatry.* 79:840-1. A brief account of Richard Bright (1789-1858) who was the first to recognise that epilepsy originated in the cortex rather than in the medulla

Pearce JM (2009): Marie-Jean-Pierre Flourens (1794-1867) and cortical localization. *Eur Neurol.* 61:311-4. Epub 2009 Mar 17. An account of Flourens and his experimental work, mostly on birds, to investigate Gall's controversial ideas on brain localisation.

Pearce JM (2009): The ophthalmoscope: Helmholtz's Augenspiegel. *Eur Neurol.* 61:244-9. Epub 2009 Jan 31. Although there were several precursors it was Helmholtz who created the first useable ophthalmoscope and his achievements and biography are outlined in this paper.

Pearce JM (2009): Henry Gray's Anatomy. *Clin.Anat.* 22: 291-5. Little is generally known of Henry Gray, the author of *Gray's Anatomy*, and even less of his colleague Henry Vandyke Carter, who played a vital role in the dissections and illustrations which led to the production of the first volume in 1859. This essay sketches briefly the salient aspects of these two men and their divergent careers and traces the subsequent fate of this unique book.

Pearce JM (2009): Richard Bright and his neurological studies. *Eur Neurol.* 61:250-4. Epub 2009 Jan 31. Remembered for his account of glomerulo-nephritis (Bright's disease) he also made many important and original contributions to medicine and neurology and this article outlines his career and contributions to neurology.

Pearce JM (2009): Broca's aphasics. *Eur Neurol.* 61:183-9. Epub 2009 Jan 8. Most papers on Broca's work contain only brief, derivative references to his 1861 paper describing his famous patient, M.Leborgne ('Tan'); the paper, translated into English, is reproduced here.

Pearce JM (2009): Sir Samuel Wilks (1824-1911): 'the most philosophical of English physicians'. *Eur Neurol.* 61:119-23. Epub 2008 Dec 9. A description of some of the achievements and personal attributes of Sir Samuel Wilks - one of the great Guy's Hospital physicians and neurologists of the second half of the 19th century.

Pearce JM (2009): Hugo Karl Liepmann and apraxia. *Clin Med.* 9:466-70. Liepmann (1863-1911) elucidated numerous movement pathologies and this paper summarises his work

Perrini P, Nannini T, Di Lorenzo N (2007): Francesco Rizzoli (1809-1880) and the elusive case of Giulia: the description of an 'arteriovenous aneurism passing through the wall of the skull'. *J.Neurosurg. Sci* 51: 33-7. The Italian surgeon Rizzoli was able in 1873 to use the 9 year old Giulia's signs and symptoms to predict the angioarchitecture of her condition and the clinical course of that case is discussed in the light of current neurosurgical knowledge.

Philippon J, Poirier J (2009): Joseph Babinski's legacy. *Rev Prat.* 59: 290-3. (In French: no abstract available)

Plummer C, Vellar ID, Murphy MA. Cook, MJ (2008): 'A Twist in the Tale' of a Surgeon and his Patient: An Australian First in Seizure Localisation. *J.Hist.Neurosci.* 17:

33-44. An intriguing epilogue to an important landmark in Australian neurosurgery.
[DOI:10.1080/09647040600792622]

Quinn TJ, Dawson J, Walters M (2008): Dr John Rankin: His Life, Legacy and the 150th Anniversary of the Rankin Stroke Scale. *Scott. Med.J.* 53: 44-7. Rankin (1923-1981) is best remembered for his publications for his series of papers in the late 1950s where he described rehabilitative stroke medicine using a novel grading system and this paper reviews his scientific career.

Rengachary SS, Colen C, Guthikonda M (2008): Charles-Edouard Brown-Sequard: An eccentric genius. *Neurosurgery* 62:954-964. Includes an extensive biographical sketch and a section on Brown-Sequard's contributions to neuroscience

*Rengachary SS, Lee J, Guthikonda M (2008): Medicosocial problems engendered with the discovery of the Bell-Magendie Law. *Neurosurgery* 63:164-71; discussion 171-2. A summary of the conflicting claims to the discovery of the Law and a valuable discussion of the two medico-social issues arising from it: 'body-snatching' and cruelty to experimental animals.

Rengachary SS, Pelle D, Guthikonda M (2008): Contributions of Johann Jacob Huber to the surface anatomy of the spinal cord and meninges. *Neurosurgery* 62:1370-1374. The subject of this review is well described in the title.

* Reis CVC, Sankar T, Crusius M, et al. (2008): Correlative study of cranial topographic procedures: Broca's legacy toward practical brain surgery. *Neurosurgery* 62: 294-310. Early neurosurgeons needed external landmarks by which to find the locations of brain structures. Broca was a pioneer in this effort. This paper reviews his method and many that followed him, including some original anatomical research by the authors to test the accuracy and the comparability

Reynolds EH, Andrew M (2007): Hughlings Jackson's early education. *J.Neurol.Neurosurg.Psychiatry* 78: 92. A brief account of Jackson's schooling in Green Hamerton and Tadcaster, Yorkshire, and Nailsworth, Gloucestershire, with a copy of an 1854 Ordnance Survey map showing Jackson's Yorkshire school

Reynolds E (2007): Todd, Faraday and the electrical basis of brain activity. *Pract.Neurol.* 7: 331-5. The origins of our understanding of brain electricity and the electrical discharges of epilepsy can be traced to Robert Bentley Todd (1809-60) who was influenced by his London contemporary Michael Faraday (1791-1867) and this paper reviews Todd's electrophysiological ideas.

Reynolds EH (2007): Jackson, Todd and the Concept of 'Discharge in Epilepsy'. *Epilepsia* 48: 2016-2022. It is argued that it is incorrect to attribute to Jackson the credit of first proposing the concept of electrical discharges in epilepsy in 1890; this credit should go to Todd, a generation earlier, in the Lumleian lectures of 1849.

Rickards H, Cavanna AE (2009): Gilles de la Tourette: the man behind the syndrome. *J Psychosom Res.* 67: 469-74. [DOI:10.1016/j.jpsychores.2009.07.019]. A biography of Tourette showing that he made many contributions to neuropsychiatry in addition to the description of his famous 'Maladie des Tics'

Sala J, Cardeña E, Holgado MC, Añez C, Pérez P, Periñan R, Capafons A (2008): The contributions of Ramon y Cajal and other Spanish authors to hypnosis. *Int J Clin Exp*

Hypn. 56: 361-72.. A review of the longstanding interest of Cajal in hypnosis and anomalous phenomena and of the work of other Spanish hypnosis pioneers

Sammet K (2008): Carl Weigert (1845-1904). *J.Neurol.* 255: 1439-1440. A short biography of Carl Weigert who pioneered some of most important techniques in neurohistology

Sarkcioglu L, Arican RY (2007); Wilhelm Heinrich Erb (1840-1921) and his contributions to neuroscience. *J. Neurol. Neurosurg. Psychiatry.* 78: 732. A short account of the scientific career of Wilhelm Erb, well known for his innovative contributions to neurology

Samiloilov VO (2007): Ivan Petrovich Pavlov (1849-1936). *J.Hist.Neurosci.* 16: 74-89. This essay traces the sources of Pavlov's researches to their beginnings in Claude Bernard's writings.

Sammet, K (2007): Luigi Rolando (1773-1831). *J.Neurol.* 254: 404-5. A review of Rolando's life and work bringing out some of the negative and positive reception it received in the late eighteenth/early nineteenth century

Sarikcioglu, L (2007): Johna Bernhard Aloys van Gudden: an outstanding scientist. *J.Neurol.Neurosurg.Psychiatry* 78, 195. A brief biography of von Gudden (1824-1886) best known for his work on the partial decussation of the optic nerves.

Sarikcioglu L, Arican RY (2007); Wilhelm Heinrich Erb (1840-1921) and his contributions to neuroscience. *J. Neurol. Neurosurg. Psychiatry.* 78: 732. A short account of the scientific career of Wilhelm Erb, well known for his innovative contributions to neurology.

Sarikcioglu L,, Yildrum FB (2008): Area Postrema: one of the Terms Described by Magnus Gustaf Retzius. *J.Hist.Neurosci.* 17: 109-110. A sort discussion of Retzius and the naming of the Area Postrema. [DOI:10.1080/09647040701236578]

Sartin JS, Lanska DJ (2008): Surgeon General William A. Hammond (1828-1900): successes and failures of medical leadership. *Gunderson Lutheran Med J.* 5: 21-8. [<http://www.gundluth.org/upload/docs/Research/SurgeonGeneral.pdf>]. This article recounts Hammond's career from the perspective of medical leadership successes and failures, including discussion of his early career, his court-martial as Surgeon General, antebellum private practice, contributions to development of neurology as a specialty, battles with "alienists", later career, and legacy.

Schiffter R (2007): Romberg: a biographical sketch. *Fortschr. Neurol. Psychiatr.* 75: 160-7. The life, work and principal scientific contributions of Moritz Heinrich Bomberg (1795-1873), often considered to be one of the most important originators of clinical neurology, is summarised with newly discovered photos, portraits and documents. (In German)

Schmitt C, Mehlman CT, Meiss AL (2008): Hyphenated history: Erb-Duchenne brachial plexus palsy. *Am J Orthop.* 37: 356-8. A history of Guillaume Duchenne and Wilhelm Erb's collaborative breakthrough in the neurology of upper limb paralysis

#Schültke E (2009): Theodor Kocher's craniometer. *Neurosurgery* 64: 1001-1005. Another contribution on Kocher (1841-1917): a rediscovered giant. Craniometers were the simple forerunners of today's stereotactic frames.

Skalski JH (2007): Albert Wojciech Adamkiewicz (1850–1921). *J.Neurol.* 254: 818-9. Working first in Königsberg and later in Cracow Adamkiewicz is principally known for his writings on cerebral vasculature and for the discovery of the major radicular artery or ‘Adamkiewicz’s artery’

Skoromets AA, Akimenko MA (2007): The History of Neurology in St Petersburg. *J.Hist.Neurosci.* 16: 90-99. This paper stresses the original character of the St Petersburg school of neurology and reviews the work of the many neurologists who were associated with it.

Snyder, PJ, Pearn, AM (2007): Historical note on Darwin’s consideration of early-onset dementia in older persons, thirty-six years before Alzheimer’s initial case report. *Alzheimer’s and Dementia* 3: 137-142. Between 1869 and 1875 James Crichton-Browne, Director of the West Riding Pauper Lunatic Asylum, knowing of Darwin’s work on the *Expression of the Emotions* (1872) wrote to the naturalist describing his observations of the extreme emotional expressivity accompanying ‘senile decay’; Darwin took note of these observations in his book and Snyder and Pearn argue that this is the first occasion when emotional release due to ‘brain wasting’ was described, thirty six years before the work of Alois Alzheimer.

Stahnisch FW (2008): Ludwig Edinger (1855-1918). *J Neurol.*255: 147-8. A brief biography of one of the founders of comparative neurology who was also a fine artist and developed an interest in hypnotism

Stahnisch FW (2008): Ludwig Edinger (1855-1918). *J Neurol.*255: 147-8. A brief biography of one of the founders of comparative neurology who was also a fine artist and developed an interest in hypnotism

Stanisch FW (2008): Instrument transfer as Knowledge Transfer in Neurophysiology: Francois Magendie’s (1783-1855) Early Attempts to Measure Cerebrospinal Fluid Pressure. *J.Hist.Neurosci.* 17: 72-99. This paper focuses on the experimental contingencies that prompted instrument transfer in Magendie’s laboratory and thereby opened up new epistemological perspectives for research in neurophysiology. [DOI: 10.1080/09647040600913699]

Stahnisch FW. (2009): François Magendie (1783-1855). *J Neurol.* 256: 1950-2. [10.1007/s00415-009-5291-3]. An account of the life, work and cultural context of one who is sometimes regarded as the father of experimental physiology’

Stefanidou M, Sola C, Kouvelas E, Cerro Manuel del (2007): Cajal’s Brief Experimentation with Hypnotic Suggestion. *J.Hist.Neurosci.*, 16, 51-62. A translation and critical assessment of Cajal’s short 1889 paper ‘Pains of labour considerably attenuated by hypnotic suggestion’ placing it in the philosophical and scientific context of the time.

Steinberg, DA (2009): Cerebral Localisation in the Nineteenth Century – The Birth of a Science and its Modern Consequences. *J.Hist.Neurosci.* 18: 254-61. An account, largely focused on Hughlings Jackson, of mid to late nineteenth-century localisation.

Strausfeld NJ, Seyfarth EA (2008): Johann Flögel (1834-1918) and the birth of comparative insect neuroanatomy and brain nomenclature. *Arthropod Struct. Dev.* 37: 434-41. A biographical sketch and summary of Flögel’s remarkable achievements in establishing a ‘baseline’ for insect neuroanatomy

Stutzer P, Kesselring J (2008): Wilhelm Uhthoff: a phenomenon 1853 to 1927. *Int MS J. 15*: 90-3. An account of the Wilhelm Uhthoff who is best known for his contribution to the pathophysiology of transient visual disturbance.

Todman, D (2009): Arnold Pick (1851-1924). *J Neurol 256*: 504-5. Epub 2009 Mar 5. Best-known for the neurodegenerative disease which bears his name, Pick in fact published over 350 scientific papers and a textbook of neuropathology. This short biography reviews his scientific career.

Triarhou LC, del Cerro M (2008): Cajal on solar eclipse. *Eur. Neurol. 59*:108-11. A translation of and commentary on Cajal's entry into an exercise book when as an eight-year old he observed the total eclipse of 18 July 1860

Tubbs RS, Loukas M, Salter EG, Oakes WJ (2007): Wilhelm Erb and Erb's point. *Clin Anat. 20*:486-8. A brief history of Erb's (1840-1921) adult life and a review of his original description of his supraclavicular point contrasting it with the so-called nerve point of the posterior cervical triangle.

Tubbs RS, Loukas M, Shoja et al. (2008): François Magendie (1783-1855) and his contributions to the foundations of neuroscience and neurosurgery. *J Neurosurg. 108*:1038-42. Magendie made significant contributions to neuroanatomy, physiology and pharmacology and this review shows that he can also be regarded as an early pioneer of neurosurgery.

Tubbs RS, Loukas M, Shoja MM et al (2008): François Magendie (1783-1855) and his contributions to the foundations of neuroscience and neurosurgery. *J. Neurosurg. 108*:1038-42. A review of the life and work of Magendie concluding that, in addition to so much else, he can also be considered an early pioneer of neurosurgery

Tubbs RS, Loukas M, Shoja MM, Cohen-Gadol AA (2009): Wilhelm His (1831-1904) and his contributions to neuroanatomy. *Child's Nerv Syst. 25*:1613-5. [DOI: 10.1007/s00381-009-0994-4]. A discussion of the life and writings of the Swiss neurohistologist and neuroembryologist, Wilhelm His, Sr.

Ulgen BO, Brumblay H, Yang LJ, Doyle SM, Chung KC. (2008): Augusta Déjerine-Klumpke, M.D. (1859-1927): a historical perspective on Klumpke's palsy. *Neurosurgery 63*: 359-366 The life, career, and medical contributions of this remarkable woman with special reference to brachial palsy

Van de Graaf RC, IJpma FF, Nicolai JP (2009): Sir Charles Alfred Ballance (1856-1936) and the introduction of facial nerve crossover anastomosis in 1895. *J Plast Reconstr Aesthet Surg 62*:43-9. Epub 2008 Oct 15. The original manuscripts by Ballance and his contemporaries have been studied. Ballance's first facial nerve crossover from 1895 is described in the surgical perspective of the end of the 19th century and the theoretical reasoning for the operation is discussed.

Vein AA (2008): Leo Tolstoy's theory of sleep. *Sleep Med. 9*:320-3 Throughout his life Tolstoy was fascinated by the phenomena of sleep and this paper reviews his many writings on this topic.

Vein A (2009): Sergey Sergeevich Korsakoff (1854-1900). *J.Neurol. 256*: 1782-3 [DOI: 10.1007/s00415-009-5289-x]. A brief scientific biography of the first Professor of Psychiatry in Russia, founder of the Moscow school of Psychiatry and best-known for his work on alcoholic psychosis

Wade NJ (2008): Tartuferi's retina. *Cortex* 44: 105-6. Ferruccio Tartuferi (1852-1925), a student of Golgi, published an illustration of the retina in 1887 using his master's *reazione nera* and his reticularist idea to interpret its functioning.

Wade NJ (2008): Cajal's retina. *Cortex* 44: 227-228. A brief account of Cajal's neuronist concept of the retina (1893) emphasising the significance of the *reazione nera* and photography in his interpretation of its functioning

#Wilgus J, Wilgus B (2009): Face to Face with Phineas Gage. *J.Hist.Neurosci.* 18: 340-5. A reproduction and discussion of the first and , so-far, only picture of Gage

Walusinski, O (2007): Observation of a nervous disease attended by disturbed sleep, at times lethargic and at times convulsive. Edmé Chauvot de Beauchêne (1786). *J. Neurol. Neurosurg. Psychiatry.* 78: 975-6. Kleine in 1925 and then Levin in 1936 are conventionally credited with the first description of 'Kleine-Levin syndrome' (KLS) but this paper argues that the French physician, Beauchêne (1749-1824), described a case in 1786 in his publication *Observation sur une maladie nerveuse*.

Wassman C (2009): Physiological Optics, cognition and emotion: A novel look at the early work of Wilhelm Wundt. *J.Hist.Med and Allied.Scis* 64: 213-49. This paper discusses the importance and subsequent influence of Wundt's little known early work, the 1863 *Vorlesungen über Menschen- und Thierseele* (Lectures on human and animal psychology).

Yildirim FB, Sarikcioglu L (2007): Marie Jean Pierre Flourens (1794-1867): an extraordinary scientist of his time. *J.Neurol.Neurosurg.Psychiatry* 78:852. A brief account of one of the pioneers of brain physiology.

York GK 3rd, Steinberg DA (2009): Hughlings Jackson's suggestion for the treatment of epilepsy. *Neurology* 73:1155-8. An examination of Jackson's method of investigating a neurologic disease using a newly discovered unpublished manuscript containing his suggestions for the treatment of epilepsy

Twentieth Century

Akard W, Tubbs RS, Seymour ZA, Hitselberger WE, Cohen-Gadol AA (2009): Evolution of techniques for the resection of vestibular schwannomas: from saving life to saving function. *J Neurosurg.* 110: 642-47. A review of the early history of surgery for vestibular schwannomas with an emphasis on contributions from pioneering surgeons.

Akimenko MA (2007): Vladimir Mikhailovich Bekhterev. *J.Hist.Neurosci.* 16: 100-109. Bekhterev (1857-1927) authored over 1000 papers and speeches and created a new multidisciplinary science – psychoneurology – comprising a 'biopsychosocial' interpretation of human diseases.

Agnati LF, Genedani S, Leo G, Rivera A, Guidolin D, Fuxe K (2007): One century of progress in neuroscience founded on Golgi and Cajal's outstanding experimental and theoretical contributions. *Brain Res.Rev.* 55: 167-189. How do neurons communicate with each

other in a network? Is there some basic organisational principal underlying brain networks? This paper reviews developments towards answering these questions during the century since Golgi and Cajal.

Allegri RF (2008): The pioneers of clinical neurology in South America. *J Neurol Sci* 271: 29-33. An account of the birth and development of neurology in South America: Argentina, Brazil, Uruguay, Chile and Peru.

Alonso JM (2009): My recollections of Hubel and Wiesel and a brief review of functional circuitry in the visual pathway. *J Physiol.* 587: 2783-90. [DOI:10.1113/jphysiol.2009.169813]. Working with Torsten Wiesel by one who was his postdoctoral student

Azmitia EC (2007): Cajal and brain plasticity: Insights relevant to emerging concepts of mind. *Brain Res. Rev.* 55: 396-405. A review which emphasises the relevance of Cajal's ideas to understanding the expression of mind by the brain.

Baaj AA, Uribe JS, Vale FL, Preul MC, Crawford NR (2009): History of cervical disc arthroplasty. *Neurosurg Focus* 27:E10. [DOI: 10.3171/2009.6.FOCUS09128]. **An account of the origins of cervical arthroplasty technology**

Baran B, Bitter I, Fink M, Gazdag G, Shorter E (2008): Károly Schaffer and his school: the birth of biological psychiatry in Hungary, 1890-1940. *Eur Psychiatry* 23: 449-56. A biographical account of Schaffer and his Budapest school, emphasising the role of histopathology in psychopathology.

Baran B, Bitter I, Ungvari GS, Nagy Z, Gazdag G (2008): The beginnings of modern psychiatric treatment in Europe. Lessons from an early account of convulsive therapy. [Eur Arch Psychiatry Clin Neurosci](#). 258: 434-40. Convulsive therapy was initiated by László Meduna, a Hungarian psychiatrist, in the early 1930s and this paper reviews the original notes and discusses the case from both diagnostic and therapeutic points of view

Beach, TG (2008): The Sun Health Research Institute Brain Donation Program: Description and Experience, 1987-2007. *Cell Tissue Bank* 9: 229-245. An account of brain bank facility at Sun City, USA, which prioritises rapid post-mortem brain retrieval thus enhancing RNA integrality

Benedict SH, Bova FJ, Clark B, Goetsch SJ, Hinson WH, Leavitt DD, Schlesinger DJ, Yenice KM (2008): Anniversary Paper: the role of medical physicists in developing stereotactic radiosurgery. *Med Phys.* 35:4262-77 A review of the research, development and commercialisation of stereotaxic radiotherapy from its beginnings with the Gamma Knife in 1951 through to the present day

Benzel EC (2007): "You can't teach an old dog new tricks". *J. Neurosurg. Spine* 6: 494-5. An introduction to a groundbreaking 1958 publication by R.B. Cloward: 'The anterior approach for removal of ruptured cervical discs' which follows (pp.602-17) which provides insight into surgical politics in the mid-1950s

Bergman WC, Schulz RA, Davis DS (2009): Factors influencing the genesis of neurosurgical technology. *Neurosurg Focus*. 27: E3. [DOI: 10.3171/2009.6.FOCUS09117]. Using two examples, drills to perform cranial bone cuts and an imaging device providing an axial view of the lumbar spine, the authors discuss the factors influencing the evolution of neurosurgical technology.

Berlucchi G (2008): British roots of Italian neurophysiology in the early 20th century. *Curr. Biol*. 18: R51-6. A nicely illustrated account of the part played by Sherrington and Adrian in the development of Italian neurophysiology in the first part of the twentieth century, in particular their influence on Mario Camis and Giuseppe Moruzzi

Bleck TP (2009): Historical aspects of critical care and the nervous system. *Crit Care Clin* 25:153-64. Although the genesis of neurocritical care begins in prehistory, this article gives a predominantly North American history, emphasising the work of Walter Dandy at Johns Hopkins in the 1930s, with brief forays into the rest of the world community of neurointensivists.

Bliss M (2009): William S. Halsted and Harvey W. Cushing: reflections on their complex association. *J Neurosurg* 110(2):382-3; discussion 383. Comment on Vorhees et al.: see below

Bogdanov EI, Mukhamedzyanov RZ , Sozinov AS, Vilensky JA (2009): L.O.Darkshevik (1858-1925)(150th anniversary). *J.Neurol* 256: 1028-29. Darkshevik (or Darkschewitsch), a neurologist and clinician-scientist, played a significant role in Russian neurology during a transitional phase of Russian history. See also Golden RL below.

Bogousslavsky J (2007): Marcel Proust's lifelong tour of the Parisian Neurological Intelligentsia from Brissaud and Dejerine to Sollier and Babinski. *Eur Neurol*. 57: 129-36. See next entry

Bogousslavsky J (2007): Marcel Proust's diseases and doctors: the neurological story of a life. *Front.Neurol.Neurosci*. 22: 89-104. These two essays describe how Marcel Proust (1871-1922), the son of neurologist Adrien Proust, associated with many of the most celebrated neurologists of his time and show how his life journey provides a unique perspective on the neurological intelligentsia at the turn of the nineteenth and beginning of the twentieth centuries.

Borck C (2008): Recording the Brain at work: the Visible, the Readable and the Invisible in Electroencephalography. *J.Hist.Neurosci*. 17: 367-79. Analysis of the graphic code guided research in EEG but the epistemological mind/brain problem remains as intractable as ever. [DOI: 10.1080/09647040701348322]

Broussole E, Krack P, Thobois S, Xie-Brustolin, J, Pollak P, Goetz CG (2007): Contribution of Jules Froment to the study of parkinsonian rigidity. *Mov. Disord*. 22: 909-14. A detailed account of the French neurologist's contribution to the study and diagnosis of neural degenerations, especially of Parkinson's disease in the 1920s.

Broussole E, Rethy MP, Thobois S (2009) ; Jules Froment (1878-1946). *J Neurol*. 256:1581-2. [DOI: 10.1007/s00415-009-5214-3]. A short biography of one of the most distinguished French neurologists of the first half of the 20th century

Brun A (2007): Identification and characterisation of frontal lobe degeneration: historical perspective on the development of FTD. *Alzheimer's dis.Assoc.Disord.* 21: 53-4. An historical account of the development of the concept of frontotemporal dementia from the late 1960 until the present emphasising the importance of biochemical markers and genetics.

Buda O, Arsene D, Ceausu M, Dermengiu D, Curca GC (2009): Georges Marinesco and the early research in neuropathology. *Neurology* 72: 88-91. Marinesco was a prolific researcher in the field of neuropathology, especially neurodegeneration but also in clinical neurology. He is now considered the founder of the modern Romanian school of neurology.

Burchiel KJ (2007): The Wada test. *J.Neurosurg* 106: 1116. An introduction to the 1958 paper published by Wada and Rasmussen which established the use and value of intracarotid injection of Sodium Amytal and Metrazol; Wada and Rasmussen's paper is reprinted following Burchiel's introduction, pp.1117-1133.

Burke RE (2007): Sir Charles Sherrington's the integrative action of the nervous system: a centenary appreciation. *Brain* 130: 887-94. A summary of how Sherrington's seminal book was written, a summary of its contents and a consideration of its impact on Neurology and Neuroscience

Cabrera LL-O (2007): La voluntad pedagógica de Cajal, Presidente de la JAE. *Ascepio: Revista de Historia de la Medicina y de la Ciencia.* 59: 11-36. A discussion of the role of Cajal in establishing the *Junta para Ampliación de Estudios e Investigaciones Científicas (JAE)* and in his mentoring of young scientists during his Presidency from 1907-1932

Casper S (2007): 'Then why not an Association of British Neurologists?': British Neurologists and the Founding of an Elite Medical Society. *Adv.Clin.Neurosci & Rehab.* 7: 16-17. A brief, biographically-orientated, account of the origin in 1932 and early years of the ABN

Casper ST (2008): Atlantic conjunctures in Anglo-American neurology: Lewis H. Weed and Johns Hopkins neurology, 1917-1942. *Bull Hist Med* 82: 646-71. It is argued that the difficult emergence of a department of neurology at Johns Hopkins forms a case study of the international and institutional context of neurology generally.

Cavanna AE, Trimble M, Cinti F, Monaco F (2007): The 'bicameral mind' 30 years on: a critical reappraisal of Julian Jaynes' hypothesis. *Funct. Neurol.* 22: 11-15. Jaynes 1956 book caused huge interest and controversy and this paper discusses neurological and philological accuracy of Jaynes' ideas and asks whether the 'bicameral mind' has stood the test of time

#Christen M (2008): Varieties of Publication Patterns in Neuroscience at the Cognitive Turn. *J.Hist.Neurosci* 17: 207-225. An investigation of the publication patterns of six scientists at the 'cognitive turn' (the introduction of IT and cybernetics into neuroscience) which reveals the limitations of standardised procedures based on publication activity. [DOI: 10.1080/09647040601150564]

Clarac F, Pearlstein E (2007): Invertebrate preparations and their contribution to neurobiology in the second half of the twentieth century. *Brain.Res.Rev.* 54: 113-61. A comprehensive review of the contribution of invertebrate preparations to our understanding of the general principles of neuroscience.

Clarac F, Massion J, Stuart DG (2009) Reflections on Jacques Paillard (1920–2006) — A pioneer in the field of motor cognition. *Brain Res. Rev.* 61: 256-80. [DOI: 10.1016/j.brainsrev.2009.07.003]. A brief biography and well-illustrated and detailed review of the scientific contributions of Jacques Paillard best known for his work on human motor cognition

Clarke MJ, Meyer FB (2007): The history of mathematical modelling in hydrocephalus. *Neurosurg. Focus* 22: E3. A brief account of the short history, limitations and future of mathematical approaches to hydrocephalus

Classon DO, Boes CJ (2009): Rosenow's rabbits and postencephalitic parkinsonism. *Neurology* 73:1240-1. A description of three films showing patients suffering from the early 20th century pandemic of encephalitis lethargica and Rosenow's reconstruction of the condition on rabbits.

Cohen-Gadol AA, Geryk B, Binder DK, Tubbs RS (2009): Conquering the third ventricular chamber. *J Neurosurg* 111: 590-599. [DOI: 10.3171/2008.9.17664]. The authors review Cushing's previously undisclosed endeavour to approach the 3rd ventricle and review Dandy's pioneering surgery of this region.

Collinge J, Alpers MP (2008): Reminiscences and reflections on kuru, personal and scientific. *Philos Trans R Soc Lond B*, 363: 3613 An introduction to an issue on kuru in Papua-New Guinea attended by all the 90 or so current researchers

Collmann H, Vitzthum HE (2008): Historical perspective on neurosurgery in Germany after World War II. *Neurosurgery* 63: 989-99; discussion 999-1000. An account of the development of neurosurgery in Germany after the collapse of the Third Reich, in both East and West Germany and subsequently in the unified Germany

Cybulski GR, Stone JL, Patel KJ (2008): Sir Victor Horsley's contributions to the study and treatment of gunshot wounds of the head. *Neurosurgery*. 63: 808-11; discussion 811-2 A review of Horsley's experimental and clinical studies of gunshot wounds to the head in his publications from 1894-1897 and from 1914 to 1915. It is argued that they have largely stood the test of time.

Davidson L, Liu CY, Zelman V (2008): Alexander N. Konolov: Neurosurgeon, leader, mentor. *Neurosurgery* 62: 249-255. Konolov has been the director of the Burdenko Neurosurgery Institute in Moscow since 1975. He brought neurosurgery in the former Soviet Union onto the world stage despite the isolationist policies of its former totalitarian regime. After the fall of the Soviet Union, he maintained the unity of the Eastern European neurosurgeons.

Davies DC, Cavada C (2007): Symposium: 'A celebration of neuroanatomy in the centennial of Cajal's Nobel Prize'. *J.Anat.* 211: 149-50. Introduction to the symposium held in Madrid to mark the centenary of the Golgi-Cajal Nobel Prize in 1906

De Almeida AN, Teixeira MJ, Feindel WH (2008): From lateral to mesial: the quest for a surgical cure for temporal lobe epilepsy. *Epilepsia* 49: 98-107 A review of the development of an understanding of temporal lobe epilepsy with special emphasis on the work of Penfield, Jasper and their associates at the MNI

De Carlos JA, Borrell I (2007): A historical reflection on the contributions of Cajal and Golgi to the foundations of neuroscience. *Brain Res.Rev.* 55: 3-7. A well-illustrated review of the importance of Cajal's studies using the Golgi technique as well as of the similar studies carried out by Golgi and the events which occurred during the Nobel ceremonies. The paper ends with an assessment of the contributions of both scientists to the founding of modern neuroscience.

De Castro F, López-Mascaraque L, De Carlos JA (2007): Cajal: Lessons on brain development. *Brain Res.Rev.* 55: 481-9. A review of Cajal's pioneering studies on the development of different neurons in several CNS areas and its significance in the development of his ideas on the individuality of neurons

del Cerro M, Triarhou LC (2009): Eduardo De Robertis (1913-1988). *J Neurol.*256:147-8. Epub 2008 Oct 7. De Robertis received multiple awards, both national and international, for his work on the structure and function of nervous tissue. This article reviews his life and scientific career.

Devinski J, Lowenstein D, McElrea R (2009): Harold Shaw and the Ross Sea Party: Epilepsy in the Antarctic. *J.Hist.Neurosci.* 18: 320-328. The 29-year-old Shaw, although subject to epileptic seizures, was a member of the party charged with supplying Shackelton's Antarctic expedition and this paper reviews his life and his post-ictal behaviours.

Devinsky J, Schachter S (2009): Norman Geschwind's contribution to the understanding of behavioral changes in temporal lobe epilepsy: the February 1974 lecture. *Epilepsy Behav.* 15: 417-24. [DOI:10.1016/j.yebeh.2009.06.006]. A summary of Geschwind's contributions (between 1973 and 1984) on temporal lobe epilepsy

Devinsky O (2009): Norman Geschwind: influence on his career and comments on his course on the neurology of behavior. *Epilepsy Behav.* 15:413-6 [DOI:10.1016/j.yebeh.2009.04.029]. A study of Geschwind's scientific career, including those by whom he was influenced and his legacy

Domżał TM (2008): History of Polish neurology and neurosurgery. Professor Edward Flatau (1868-1932). *Neurol Neurochir Pol.* 42:366-71. (not seen)

Doroshov DB (2007): Performing a cure for schizophrenia: insulin coma therapy on the wards. *J.Hist.Med.Allied Sci.* 62:213-43. An exploration of the ICT era, roughly 1933-60, as a key period in the development of American psychiatry.

Douglas RJ, Martin KAC (2007): The butterfly and the loom. *Brain Res.Rev.* 55: 314-28. An essay on the interacting science and personalities of Cajal and Sherrington in analysing the brain's fine structure

Díaz JL (2009): The legacy of Cajal in Mexico. *Rev Neurol* 48: 207-15. It is shown that because of the Spanish Civil War (1936-9) a number of researchers from the Cajal Institute in Madrid migrated to Mexico where they pioneered the neurological sciences at the National University of Mexico (UNAM).

#De Leo A (2008): Enrico Sereni: Research on the Nervous System of Cephalopods. *J.Hist.Neurosci.* 17: 56-71. Sereni worked at the Naples Zoological Station during the years 1925-1931 and contributed both to Italian neuroscience and to Cephalopod neuroscience leading ultimately to J.Z.Young's discovery of giant fibres. [DOI: 10.1080/09647040600903187]

Egiazaryan GG, Sudakov KV (2007): Theory of Functional systems in the Scientific School of P.K.Anokhin. *J.Hist.Neurosci.* 16: 194-205. A brief scientific biography of Pyotr Anokhin (1898-1974) one of Pavlov's pupils with special reference to the theory of functional systems and their evolution.

Elias WJ, Ray DK, Jane JA (2008): Lennart Heimer: concepts of the ventral striatum and extended amygdala. *Neurosurg. Focus.* 25: E8. A scientific biography of Heimer (1930-2007) a well-known neurosurgeon of Swedish descent

Ellis H (2009): Augusta Klumpke: pioneering female neurologist. *Br J Hosp Med (Lond).* 70(1):41. Augusta Déjerine-Klumpke (1859-1927) made influential contributions to neurology at the turn of the 20th century and greatly helped the entry of women into medical careers

Elmaci I, Balak N (2008): Pioneering Turkish neurosurgeon Hami Dilek and the traces of Harvey Cushing's legacy in his work. *Journal of Neurosurgery* 108: 821-829. Hami Dilek trained mainly in France. He became the first surgeon to practice neurosurgery regularly in Turkey during the 1930s.

Enchev Y, Oi S (2008): Historical trends of neuroendoscopic surgical techniques in the treatment of hydrocephalus. *Neurosurg Rev.* 31: 249-62 The historical milestones and state of the art of neuroendoscopic treatment of hydrocephalus are reviewed for each of its surgical techniques - choroid plexus coagulation, third ventriculostomy, aqueductoplasty, septostomy, foraminal plasty of the foramen of Monro, and foraminal plasty of the foramen of Magendie. Future trends are discussed

Enchev Y (2009): Neuronavigation: genealogy, reality, and prospects. *Neurosurg Focus.* 27: E11. [DOI: 10.3171/2009.6.FOCUS09109]. The history of neuroradiology is reviewed together with the detailed evolution of frame-based stereotaxy and its successor – neuronavigation. Future trends are outlined

Engel J Jr. (2008): More on the history of temporal lobe surgery. *Epilepsia.*49:1481-2. A letter on the role of Penfield and Jasper on treatment of temporal lobe epilepsy

Eusebi F (2007): Ricardo Miledi and the foundations of synaptic and extra-synaptic neurotransmitter receptor physiology. *J.Physiol.* 581: 890-2. A careful account of the two papers published by Miledi in 1960 which represent a milestone in synaptology

Fairén, A (2007): Cajal and Lorente de Nó on cortical interneurons: coincidences and progress. *Brain Res.Rev.* 55: 430-44. An account of the Lorente de Nó's studies on neuronal microcircuits during the 1930s which led up to the synthesis he presented in his well-known chapter in Fulton's 1938 *Physiology of the Nervous System*.

Feindel W (2007): the physiologist and the neurosurgeon: the enduring influence of Charles Sherrington on the career of Wilder Penfield. *Brain* 130: 2758-65. In 1915, as a Rhodes scholar at Oxford, Penfield followed the first course in mammalian physiology given by the newly appointed professor, Charles Sherrington, which, it is argued, gave him the groundwork for his latter career as a physiological neurosurgeon.

#Feindel W, Leblanc R, de Almeida AN (2009): Epilepsy surgery: historical highlights 1909-2009. *Epilepsia*.50 Suppl 3:131-51. This review begins with the reports of Horsley, Krause, and Cushing which appeared in 1909, the year that ‘The International League Against Epilepsy (ILAE)’ was inaugurated, and then outlines key contributions from Europe and North America, particularly the evolution of our understanding of temporal lobe seizures.

Feindel W (2009): Osler vindicated: glioma of the leg center with Jacksonian epilepsy; removal and cure, with a 50-year follow-up. Historical vignette. *J Neurosurg* 111: 293-300. [DOI: 10.3171/2008.3.17600]. An interesting case report with reference to the experience of Sherrington, Cushing and Penfield with cortical stimulation in the awake patient

Fishman RS (2007): The Nobel Prize of 1906. *Arch.Ophthalmol*. 125: 690-4. An account of the work leading to the Golgi-Cajal Nobel prize with special reference to one of Cajal’s favourite tissues: the retina

#Frixione E (2009): Cajal's second great battle for the neuron doctrine: the nature and function of neurofibrils. *Brain Res Rev*. 59:393-409. Epub 2008 Dec 16. An account of the controversy between Cajal, Apáthy and Bethe on the existence and physiological significance of neurofibrils that forms an important chapter in the history of the cytoskeleton.

Fuller J (2007): The poetry of Sir Charles Sherrington. *Brain* 130: 1981-1983. An appreciative assessment.

Galende AV (2008): Neuroscientists in the Third Reich. *Neurologia* 23: 126-35. An analysis of the effects of the Nazi regime on German neurologists and neuroscientists showing the perverse role that politics may play in medicine and that science should not forget ethics. (In Spanish)

Gandhi CD, Christiano LD, Eloy JA, Prestigiacomo CJ, Post KD (2009): The historical evolution of transsphenoidal surgery: facilitation by technological advances. *Neurosurg. Focus* 27: E8 [DOI: 10.3171/2009.6.FOCUS09119] . A review of the ‘historical maze’ which has led over the past century to modern TSS

#Gautschi, OP, Hildebrandt G (2009): Emil Theodor Kocher (25/8/1841-27/7/1917)--A Swiss (neuro-)surgeon and Nobel Prize winner. *Br J Neurosurg*. 23: 234-6. The important and under-recognized contributions to the neurosciences of a master surgeon and physiologist are briefly described

Garcia-Marin V, Garcia-López P, Friere M (2007): Cajal's contributions to the study of Alzheimer's disease., *J Alzheimers Dis*.12:161-74. Discovery of 37 histological preparations from Alzheimer patients in the Museum Cajal in Madrid indicates that he investigated the condition and this paper, fully illustrated by photos of Cajal’s original slides, reviews his contribution.

* Garcia-Marin V, Garcia-López P, Freire M (2007): Cajal’s contributions to glia research. *TINS*, 30, 479-87. This paper focuses on Cajal’s histological research into glial cells including reproductions of his original drawings and argues that in the study of glia as well as in that of neurons he was far ahead of his time.

#Garcia-Marin V, Garcia-López P, Freire M (2009): The Growth Cone as Seen Through Cajal’s Original Histological Preparations and Publications. *J.Hist.Neurosci*. 18: 197-

210. This paper reviews the discovery of the growth cone by Cajal in 1890 and discusses his view of its function in the light of modern knowledge

Gardner PA, Prevedello DM, Kassam AB, et al. (2008): The evolution of the endonasal approach for craniopharyngiomas. *Journal of Neurosurgery* 108:1043-1047. Craniopharyngiomas have always been an extremely challenging type of tumor to treat. The authors present a historical review of the literature from the introduction of the endonasal route for resection of craniopharyngiomas until the present

Gazdag G, Baran B, Kárpáti M, Nay Z (2007): The history of Lipótmező, the site of the first convulsive therapy. *JECT* 23:221-3. The first convulsive therapy was performed by László Meduna in 1934 at the 'Lipót' and this paper reviews the subsequent 70 years ending with an account of its closure in 2007.

Gibson WC (2007): A student recalls Sir Charles Sherrington OM (1857-1952). *Brain* 130: 2766-9. A memoir of the author's friendship with Sherrington from the mid-1930s until Sherrington's death in 1952

Gilkes CE (2008): An account of the life and achievements of Miss Diana Beck, Neurosurgeon (1902-1956). *Neurosurgery* 62:738-742. Diana Beck "was probably the first female neurosurgeon in the world and played a large part in establishing neurosurgery in the United Kingdom." She came to public attention when she operated on Alan Alexander Milne in 1952

Gill AS, Binder DK (2007): Wilder Penfield, Pio del Rio-Hortega, and the discovery of oligodendroglia. *Neurosurgery* 60: 940-8. In 1924 Penfield visited Spain to work with Cajal and Rio-Hortega and one of the results was the publication of a seminal article characterising this important class of glial cells.

Giménez-Roldán S.(2009): Fifteen years history of Parkinson's disease in Spain (1963-1977). A personal recollection. *Rev Neurol.* 49: 490-5. An account of the increasing interest and treatment of Parkinsonism by Spanish neurologists during the last fifteen years (in Spanish)

Glickstein M (2007): Commentary on 'Holmes G. Clinical symptoms of cerebellar disease and their interpretation. Lecture 1. *The Lancet* 1922; 202 (Vol.1 for 1922): 1178-1182' and 'Holmes G. Clinical symptoms of cerebellar disease and their interpretation. *Lancet* II. *The Lancet* 1922; 202 (Vol.1 for 1922): 1232-1237'. *Cerebellum* 6: 154-6. A discussion of these two important papers and their subsequent influence

Glennerster A (2007): Marr's vision: twenty five years on. *Curr.Biol.* 17: R397-9. David Marr (1945-1980) was only 35 when he died but his posthumously published book, *Vision*, has had an enduring influence and this paper reviews Marr's life and that influence.

* Goedert M (2009): Oskar Fischer and the study of dementia. *Brain* 132: 1102-1111. In the centenary of Alzheimer's first descriptions of his eponymous condition little has been written of the contemporaneous work of Oskar Fischer: this extensive and well-illustrated paper redresses that omission.

Glozman JM (2007): A.R.Luria and the History of Russian Neuropsychology. *J.Hist.Neurosci.*, 16: 168-80. An analysis of Russian contributions to neuropsychology from the 18th to the 21st century with special reference to the work of Alexander Luria (1902-1977).

Goedert M, Ghetti B (2007): Alois Alzheimer: his life and times. *Brain Pathol.* 17: 57-62. An account of the life and neuropathological contributions of Alois Alzheimer (1864-1915) to mark the centenary of the publication of his description of his eponymous disease

Golden RL (2009): Gertrude Stein (1874-1946) and the nucleus of Darkschewitsch: a discursive commentary. *J Med Biogr.* 17: 55-60.. As a medical student at Johns Hopkins University Gertrude Stein carried out research on the nucleus of Darkschewitsch and in this paper the background of Darkschewitsch, little known in the West, is explored particularly in regard to his relationship and collaboration with Sigmund Freud.

Goodkin HP (2009): The founding of the American Epilepsy Society: 1936. *Epilepsia.* 50(3): 566-70. Epub 2008 Nov 22. This article presents previously lost details of William G. Lennox's role in establishing the American Epilepsy Society (AES) and in defining its mission.

Grant G (2007): How the 1906 Nobel Prize in Physiology or Medicine was shared between Golgi and Cajal. *Brain Res. Rev.* 55: 490-8. A review of material in the Nobel archives throws light on the discussions preceding the award of a the Nobel Prize jointly to Golgi and Cajal and of the 1906 ceremony

Grigorian NA (2007) L.A.Orbeli – Outstanding Physiologist and Science Leader of the Twentieth Century. *J.Hist.Neurosci.* 16: 181-93. An account of the many-sided scientific achievements of Leon Orbeli (1872-1958) who might be considered Pavlov's scientific heir and is best-known for his work in the physiology of extreme states (deep sea exploration, high altitude and high velocity flight)

Guillery RW (2007): Relating the neuron doctrine to the cell theory. Should contemporary knowledge change our view of the neuron doctrine? *Brain Res. Rev.* 55: 411-21. This paper argues that the neuron 'doctrine' and the cell 'theory' have significant differences and that it is now time to assess whether the further reaches of the neuron doctrine can any longer be defended.

Haber SN, McGinty JF, Mugnaini E, Zaborszky L (2008): A tribute to Lennart Heimer. *Brain Struct Funct.* 213: 3-10. Lennart Heimer (1930-2007) contributed in many ways to the advance of neuroscience especially in developing neuronal tracing techniques and as the author of successful textbooks . This article reviews his scientific career.

Harat M, Rudas M, Rybakowski J (2008): Psychosurgery: the past and present of ablation procedures. *Neuro Endocrinol Lett.* 29 (suppl 1): 105-22. A history of psychosurgery from the 1930s with a special focus on so-called "ablation" procedures such as anterior cingulotomy, anterior capsulotomy, subcaudate tractotomy, and limbic leucotomy

Hayashi K, Ushijima R, Matsuo T, Kitagawa N, Suyama K, Nagata I (2009): The 150th anniversary of Nagasaki University School of Medicine: recovery from the atomic disaster and evolution of the department of neurosurgery. *Neurosurgery.* 65: 595-9; discussion 599-600. [DOI: 10.1227/01.NEU.0000350872.53258.E7]. An account of the history of this important medical school and its department of neurosurgery

Hayward R (2009): Casey and Theo" The children who changed the face of "Water on the brain" *Brit J Neurosurg* 23: 347-350 [DOI:10.1080/02688690903131327]. A candid history of the treatment of hydrocephalus

Hermesniemi J, Dashin R, Mateo O et al. (2008): Historical landmarks in vascular neurosurgery "On July 10th 2006, at the 70th Anniversary of the Department of Neurosurgery of Zürich Medical School". *Acta Neurochir. Suppl.*;103:131-7. Direct aneurism neurosurgery started more than seventy years ago with the introduction of cerebral angiography by Moniz and the operating microscope forty years later by Yasargil and this paper reviews this history and continues the story into contemporary times

Hsu W, Li KW, Bookland M, Jallo GI (2009): Keyhole to the brain: Walter Dandy and neuroendoscopy. *J Neurosurg Pediatr.* 3: 439-42. This paper reviews Dandy's contributions to the early evolution of this growing and important field of neurosurgery

Hughes J (1970): Sir Victor Horsely (1857-1916) and the birth of English neurosurgery. *J.Med.Biogr.* 15: 45-52. An account of the life and work of one of the founding fathers of English neurosurgery

Hung TP (2008): Tributes to Macdonald Critchley and his achievements in neurolinguistics. *Acta Neurol. Taiwan* 17:127-31. A eulogy of Macdonald Critchley and his interests in neurolinguistics (In Chinese)

Idris B, Sayuti S, Abdullah JM (2007) History of the neurosciences at the School of Medical Sciences, Universiti Sains Malaysai. *J.Clin.Neurosci.* 14: 148-52. An account of the development, academic contributions and scientific progress in the neurosciences at the Universiti Sains Malaysai, the only institution in Malaysia where all the basic and applied neurosciences are gathered under one roof.

Ivanova-Smolenskaya IR, Markova ED (2007): Nikolai V.Konovalov (1900-1966): His Role in the Development of Neurology and the Creation of the Institute of Neurology of the Russian Academy of Medical Sciences. *J.Hist.Neurosci.* 16: 160-67. In addition to a large number of fundamental scientific papers he made a significant contribution to the establishment of the Institute of Neurology in the Russian Academy of Medical Sciences

Jacobson RD (2009): President Wilson's Brain Trust: Woodrow Wilson, Francis X Dercum, and American Neurology. *J.Hist.Neurol.* 18: 59-75. This paper uses the records of President Wilson's treatment for stroke and rehabilitation to illustrate the state of early twentieth-century neurology

Jea A, Al-Otibi M, Rutka, JT, Drake JM, Dirks PB, Kulkarni A, Taylor MD, Humphreys R (2007): The history of neurosurgery at the Hospital for Sick Children in Toronto *Neurosurgery* 61:612-62. "Sick Kids," as it known colloquially, has been a leader in pediatric neurosurgery since 1935.

Jerath NU, Newman JS, Boes CJ (2009): The biography of Mary E. O'Sullivan: an early American headache specialist. *Cephalalgia.* 29:1028-33. [DOI: 10.1111/j.1468-2982.2009.01845.x]. Although her life was short, her research, knowledge and ambition, at a time when women had limited opportunities in medicine, have left a mark.

Jones EG (2007): Neuroanatomy: Cajal and after Cajal. *Brain Res.Rev.* 55: 248-55. Starting with a consideration of the development by Cajal of Golgi's microtechnique, this paper reviews the evolution of fibre tracing techniques into the contemporary era emphasising that, though neuroanatomy may not be fashionable, it is nevertheless essential in all areas of neuroscience.

*July J, Manninen P, Jacob Lai J, Yao Z, Bernstein M (2009): The history of awake craniotomy for brain tumor and its spread into Asia. *Surg Neurol* 71: 621-624. An important review of the widespread employment of this renewed technique in East Asia. A worthy comment by Y. Mao is attached.

Kalueff AV, Zimbardo PG (2007): Behavioural neuroscience, exploration and K.C.Montgomery's legacy. *Brain.Res.Rev* 53: 328-31. This paper summarises the contributions Montgomery (1921-1956) made to behavioural neuroscience and discusses the current importance of these contributions for further progress in this field.

Kandel ER (2009): An introduction to the work of David Hubel and Torsten Wiesel. *J Physiol.* 587: 2733-41. [DOI:10.1113/jphysiol.2009.170688]. An introduction to a section of *J.Physiol.* devoted to the semi-centenary of the publication of Hubel and Wiesel's seminal paper on receptive fields in the cat's visual cortex with valuable reminiscences from one who knew them both.

Kandel ER (2009): The biology of memory: a forty-year perspective. *J Neurosci.* 29:12748-56. [DOI:10.1523/JNEUROSCI.3958-09.2009]. A personalized and selective journey through forty years of extraordinary advances in our understanding of the biology of memory storage.

Karroum E, Konofal E, Arnulf I (2009): Karl-Axel Eklbom (1907-1977. *J.Neurol.* 256: 683-684. An account of the Swedish neurologist best-known for his work on restless-leg syndrome (RLS)

#Kasper BS, Chang BS, Kasper EM (2009):Microdysgenesis: Historical roots of an important concept in epilepsy. *Epilepsy Behav.* 15:146-53. Epub 2009 Apr 24. This article undertakes a careful evaluation of original publications on MD in the epilepsy literature and demonstrates that the concept is anchored in a set of papers written between 1890 and 1930 and their contemporaneous reception in classic neuropsychiatric handbooks.

Kertesz A (2007): Pick complex-historical introduction. *Alzheimer Dis.Assoc.Disord.* 21: 55-7. An historical summary of the major conceptual developments in an attempt to clear up terminological chaos

Kloet A, Krouwer HG, Koehler PJ (2008): American influence on the origins of neurosurgery in the Netherlands. *J Neurosurg.* 109: 348-55. An account of the American influence on Dutch neurosurgery emphasising the roles of the Dutch neurosurgeons Bernard Brouwer, Ignaz Oljenick and Ferdinand Verbeek and the continuing American influence

Koehler PJ, Tfelt-Hansen PC (2008): History of methysergide in migraine. *Cephalalgia.* 28:1126-35. The rise, fall and subsequent use of methysergide as a third-choice drug as an effective prophylactic against migraine

Koehler PJ, Jennekens FGI (2008): Vinken and Bruyn's Handbook of Clinical Neurology: A Witness of Late-twentieth Century Neurological Progress.

J.Hist.Neurosci. 17: 46-55. An account of the origin, production and reception of the HCN [DOI: 10.1080/096470406008820050]

Kotowicz, Z (2008); Psychosurgery in Italy, 1936-39. *Hist. Psychiatry* 19: 476-489. The article argue that both the political conditions and the merging of neurology and psychiatry in Italy during the late 1930s allowed a far more rapid introduction of psychosurgical techniques there than elsewhere

Kreft G, Kovacs GG, Voigtländer T, Haberler C, Hainfellner JA, Bernheimer H, Budka H (2008): 125th anniversary of the Institute of Neurology (Obersteiner Institute) in Vienna. "Germ Cell" of interdisciplinary neuroscience. *Clin Neuropathol.* 27: 439-43. A commemoration of 125 years work at the Obersteiner neurological Institute in Vienna

Kruger L, Otis TS (2007): Whither withered Golgi? A retrospective evaluation of reticularist and synaptic constructs. *Brain Res.Bull.* 72: 201-7. A reappraisal in the light of twenty-first century knowledge of the brain's molecular biology and biophysics of the Golgi-Cajal controversy.

Kruger L (2007): The sensory neuron and the triumph of Camillo Golgi. *Brain Res.Rev.* 55: 406-10. It is argued that with the benefit of 21st century hindsight the stand-off between Cajal and Golgi at the 1906 Nobel Prize was unnecessary: both were partially right.

Kumbier E, Haack K, Herpertz SC.(2009): Franz Günther von Stockert between politics and science - a study in the history of the neurology and psychiatry in the GDR. *Fortschr Neurol Psychiatr.* 77:285-8. Epub 2009 May 5. An analysis of the affairs at the Gehlsheim neuropsychiatric clinic at Rostock University and, in particular, of Franz Günther von Stockert (1899-1967), who was head of the department between 1954 and 1958, showing how external factors can influence science and disciplinary differentiation. (In German)

Kumbier E, Zetl UK (2009): Pioneers of neurology: Johannes Sayk (1923-2005). *J.Neurol.* 256: 2109-2110. [DOI: 10.1007/s00415-009-5295-z]. A short scientific biography of the pioneer of CSF diagnostics who also played an important role in establishing the Rostov school of neurology

Lafarga M, Casafont I, Bengoechea R, Tapia O, Berciano MT (2009): Cajal's contribution to the knowledge of the neuronal cell nucleus. *Chromosoma.* 118: 437-43. [DOI: 10.1007/s00412-009-0212-x]. A reassessment of Cajal's remarkable contributions to knowledge of the neuronal nucleus in the light of current understanding of nuclear structure and function.

Langer, K (2009): Babinski's Anosognosia for Hemiplegia in Early Twentieth-Century French Neurology. *J.Hist.Neurosci.* 18: 387-405. A review of early notions about anosognosia for hemiplegia as first described by French neurologists, especially Babinski, Déjerine, Ballet and Marie, in the years 1914-1925 are reviewed.

#Langmoen IA, Apuzzo ML (2007): The brain on itself: Nobel laureates and the history of fundamental nervous system function. *Neurosurgery* 61: 891-907. A review of the work of twentieth-century Nobelists in neuroscience: Golgi/Cajal; Sherrington/Adrian; Gasser/Erlanger; Hodgkin/Huxley; Neher/Sakmann; Dale/Loewi; Eccles; Katz/Axelrod/von Euler.

Laureno R (2009): Paul Yakovlev remembered: an interview with Maurice Victor. Interviewed by Robert Laureno. *Can J Neurol Sci.* 36: 311-4. Together Victor and Yakovlev collaborated in translating the work of S.S. Korsakoff from Russian into English. Laureno's interview of Victor about Yakovlev is informative about both these great figures of North American Neurology

Lees AJ, Selikhova M, Andrade LA et al. (2008) The black stuff and Konstantin Nikolaevich Tretiakoff.. *Mov. Disord.* 23: 777-83. Tretiakoff published his doctoral dissertation on the locus niger of Soemerring and its relevance to

Lindholm J (2007): A century of pituitary surgery: Schloffer's legacy. *Neurosurgery* 61: 865-7; discussion 867-8. In 1907 Hermann Schloffer performed the first transsphenoidal operation for pituitary adenoma and this paper reviews the legacy of this pioneering surgery including its influence on subsequent treatment for acromegaly.

* Lobato RD (2008): Historical vignette of Cajal's work "Degeneration and regeneration of the nervous system" with a reflection of the author. *Neurocirugia (Astur)* 19:456-68. An account of Cajal's *Degeneration and Regeneration of the Nervous System* (Spanish 1913, English 1928) beautifully illustrated with reproductions of Cajal's drawings and supplemented by the author's reflections on his own career and the condition of neuroscience in Spain during the last half century.

Louis ED (2008): Weir Mitchell's 1859 demonstration of "a peculiar contraction" produced by a percussion hammer. *Neurology* 70: 969-73. It is shown that percussion stretch reflexes were well known to Weir Mitchell in 1859 several decades before the publications of Erb and Westphal, although relationships to disease was not discussed in Mitchell's report..

Loukas M, Noordeh N, Shoja MM et al. (2008): Hans Chiari (1851-1916). *Childs Nerv. Syst.* 24: 407-9. An account of the scientific life of Hans Chiari whose classifications of hind-brain herniation is still widely accepted

Lucey BP, Hutchins GM (2008): Did Sir William Osler perform an autopsy at the Johns Hopkins Hospital? *Arch Pathol Lab Med.* 132: 261-4. The evidence presented in this paper suggests not

Mathews MS, Linskey ME, Binder DK (2008): William P. van Wagenen and the first corpus callosotomies for epilepsy. *Journal of Neurosurgery* 108: 608-613. A trainee of Harvey Cushing William van Wagenen performed the first human callosotomies in the 1940s, and the patients were examined by Andrew Akelaitis, two decades before the work of Roger Sperry led to his Nobel prize in 1981.

Matthews PM, Radda GK, Johansen-Berg H, Tracey I, Cowey A (2008). Remembering John Newsom-Davis' contribution to human imaging in Oxford. *J Neuroimmunol.* ;201-202: 250-4. An account of the crucial role Newsom-Davies (1932-2007) played in establishing human neuroimaging at Oxford

Matis G, Birbilis T (2008): The Glasgow Coma Scale--a brief review. Past, present, future. *Acta Neurol Belg.* 108:75-89. A thoroughgoing review of the scale's history, principles of scoring and associated common pitfalls, major applications and drawbacks

Mazzarello P (2007): Net without nodes and vice versa, the paradoxical Golgi-Cajal story: a reconciliation? *Brain Res.Bull.* 71: 344-6. A reconsideration of the Golgi/Cajal controversy in the light of a century of further research on the fine structure of the brain.

Mazoyer B (2008): In memoriam: Jean Talairach (1911-2007): a life in stereotaxy. *Hum. Brain Mapp.* 29: 250-2. A well-illustrated eulogy to mark the death at the age of 96 of the physician who pioneered stereotaxic neurosurgery

McClelland S 3rd, Harris KS (2007): E.Latunde Odeku: the first African-American neurosurgeon trained in the United States. *Neurosurgery* 60: 769-72. Born in Lagos in 1927, Odeku trained in neurosurgery at Howard University College and at the University of Michigan but in spite of being offered many posts in the US, elected to return to Nigeria where he worked tirelessly in neurosurgery until his death in 1974.

McClelland S (3rd) (2007): The Montreal Neurological Institute: training of the first African-American neurosurgeons. *J Natl Med Assoc.* 99:1071-3. The MNI trained three of the first four African-American neurosurgeons - Dr Clarence Greene (1947-49), Dr Jesse Barber Jr (1958-61) and Dr Lloyd Dayes (1961-65) – and thereby enabled subsequent African-Americans to enter and enhance the field of neurosurgery.

McClelland S III (2008): Alexa Irene Canady: the first African-American woman neurosurgeon. *J. Natl. Med. Assoc.* 100: 439-43. This paper details the career and achievements of Alexa Canady, trained under Dr Chou at the University of Minnesota, whose distinguished career helped to open the door to neurosurgical careers for subsequent Afro-Americans

McClelland, S III, Long D M (2008): Genesis of the use of corticosteroids in the treatment and prevention of brain edema. *Legacies. Neurosurgery* 62: 965-968. The groundbreaking article from the University of Minnesota in 1961 by Drs. Galicich, French, and Melby, describing the use of dexamethasone for peritumoral cerebral edema, was arguably the greatest translational research contribution in the history of neurosurgery.

McDonald I (2007):Gordon Holmes Lecture: Gordon Homes and the neurological heritage. *Brain* 130: 288-98. A review of the life, work and enduring influence of Gordon Holmes (1876-1966)

Meijer OG, Bruijn SM (2007): The Loyal Dissident: N.A.Bernstein and the double-Edged Sword of Stalinism. *J.Hist.Neurosci.* 16: 206-24. Nikolai Bernstein (1896-1966) studied movement in order to understand the brain and it is argued that the consistency of his work derived both from dialectical materialism and the relentless attacks of the neo-Pavlovians

Moreno-Diaz R, Moreno-Diaz A (2007): On the legacy of W.S.McCulloch. *Biosystems* 88: 185-90 A review of McCulloch's work and legacy, from his early work on neurophysiology and its relation to his philosophical quest for an 'experimental epistemology', through his role in cybernetics in the 1940s and 50s, to his final contributions to computer science and communication theory.

Morrison JF (2008): The discovery of the pontine micturition centre by F. J. F. Barrington. *Exp Physiol.*, 93:742-5. Barrington (1884-1956) was the first neurosurgeon to recognise the importance of the association between the brainstem and the lower urinary tract (1925) and this paper reviews his work and its subsequent influence

Muscatello U (2007): Golgi's contribution to medicine. *Brain Res.Rev.* 55: 3-7. A comprehensive account of Golgi's contributions to the non-neurological areas of medicine, especially in the clarification of the life-cycle of the malarial parasite.

Newman JD, Harris JC (2009): The scientific contributions of Paul D. MacLean (1913-2007). *J Nerv Ment Dis.* 197:3-5. A review of Paul MacLean's life and of the most important of his research contributions

Noteman J (2007): Paul Martin (1891-1968), pioneer of the neurosurgery in Belgium and cofounder member of the review "Neurochirurgie". *Neurochirurgie.* 53 :356-60. Martin was the first chief of an independent neurosurgical unit founded in Belgium in 1948 and one of the founders of *Neurochirurgie* and this article reviews his scientific career.

Ohry, A (2009): Dr Lazar Remen (1907-74): a forgotten pioneer in the treatment of myasthenia gravis. *J.Med.Biogr.* 17:73-4. Remen was the first to show the beneficial effect of prostigmine on a myasthenia gravis patient and this short paper reminds us of that fact.

Pannese E (2007): The contribution of Camillo Golgi to our understanding of the structure of the nervous system. *Arch.Ital.Biol.* 145: 111-5. A review of the main achievements of Golgi (including his errors in interpreting his own observations) in investigating the microscopic structure of the nervous system

Pareti G (2007): The 'all-or-none' law in skeletal muscle and nerve fibres. *Arch.Ital.Biol.* 145: 39-54. An account of the introduction of the all-or-none principle to muscle and nerve fibres by Keith Lucas at Cambridge in 1905 and its subsequent rapid acceptance

Pearce JM (2007): Osler and the Churg-Strauss syndrome. *Eur.Neurol.* 57: 185-7. This paper records a patient of Osler's who showed many features of Churg-Strauss syndrome which was only to be described fifty years later

Pearce JM (2007): Robert Barany. *J.Neurol.Neurosurg.Psychiatry* 78:302. A brief account of the scientific work of Barany (1876-1936) who received the 1914 Nobel Prize for his work on the vestibular apparatus and the cerebellum whilst a prisoner of war.

Pearn, J (2007): Looking both ways: the Jamieson Memorial Lecture,2006. *ANZ J.Surg.* 77: 410-17. In this lecture, commemorating the life and work of Jamieson (1925-76), Pearn argues that hindsight and a knowledge of history is as important as foresight for the development of neurosurgery and other medical specialities.

Pedley TA (2008): Ellen R. Grass lecture: present at the beginning. Ellen Grass and the evolution of modern concepts regarding EEG and epilepsy. *Am. J. Electroneurodiagnostic Technol.* 47: 241-56. A review of the work of Ellen Grass in the development of neurophysiology, epileptology and physiological technology in the US during the middle third of the twentieth century

Pedley TA (2009): Major advances in epilepsy in the last century: a personal perspective. *Epilepsia.* 50: 358-63. A useful overview of the development of epilepsy research in the 20th century showing how understanding of the disease has moved from an anatomico-physiologic perspective to a molecular neurobiological understanding.

Pereira EA, Green AL, Nandi D, Aziz TZ (2008): Stereotactic neurosurgery in the United Kingdom: the hundred years from Horsley to Hariz. *Neurosurgery*. 63: 594-606; discussion 606-7. A review of the history of stereotactic neurosurgery in the UK is presented with a discussion of its current status.

Peters A (2007): Golgi, Cajal and the fine structure of the nervous system. *Brain Res.Rev.* 5: 256-63. An account of the development of neurohistology during the second half of the 20th century

Piotrowska N, Winkler PA (2007): Otfried Foerster, the great neurologist and neurosurgeon from Breslau (Wrocław): his influence on early neurosurgeons and legacy to present-day neurosurgery. *J Neurosurg.* 107: 451-6. An overview of Foerster's (1873-1941) work in Breslau and an evaluation of its significance

Prevedello DM, Doglietto F, Jane JA Jr, Jagannathan J, Han J, Laws ER Jr (2007): History of endoscopic skull base surgery: its evolution and current reality. *J Neurosurg.* 107: 206-13. A discussion of the history of the endoscope and the key figures in the developing field of endoneurosurgery

Qiu Z, Ghosh A (2008): A brief history of neuronal gene expression: regulatory mechanisms and cellular consequences. *Neuron* 60:449-55. A discussion of how developments in molecular biology have influenced the study of neuronal gene expression and of how this has shaped our understanding of neural development

Rahman M, Murad GJ, Mocco J (2009): Early history of the stereotactic apparatus in neurosurgery. *Neurosurg Focus.* 27: E12. [DOI: 10.3171/2009.7.FOCUS09118]. A review of the history of stereotactic apparatus in the early 20th century, with a focus on the fascinating people who were key to its development

Raz M (2008): Between the Ego and the Icepick: Psychosurgery, Psychoanalysis and Psychiatric Discourse. *Bull.Hist.Med.* 82: 387-420. A reconstruction of the relation between theory and practice in the tens of thousands of lobotomies performed on Americans between 1935 and 1965 concluding by questioning the distinction between somatic and dynamic approaches to mental illness.

Rekand T (2007): Vladimir Bechterew – the professor stopped by Stalin. *Tidsskr Nor Laegeforen* 127: 3264-6. Norwegian: no abstract

Reynolds EH (2008): Kinnier Wilson and Sherrington. *J. Neurol. Neurosurg. Psychiatry* 79: 478-9. A report of two documents that have recently come to light which show a warm professional relationship between Wilson and Sherrington late in their respective careers

Reynolds EH, Trimble MR.(2009): Epilepsy, psychiatry, and neurology. *Epilepsia.* 50 Suppl 3: 50-5. A review of the relationship between the psychiatry and neurology of epilepsy, especially in the last 100 years. (see also articles by Shorvon listed below)

Richter J (2007): Pantheon of Brains: The Moscow Brain Research Institute 1925-1936. *J.Hist.Neurosci.* 16: 138-149. A brief survey of the foundation and early history the Institute and its initial task – the collecting and mapping of the brains of famous Russians and in particular that of Lenin.

#Rodriguez de Roma AV (2007): Chance, Creativity and the Discovery of the Nerve Growth Factor. *J.Hist.Neurosci.* 16: 268-87. An analysis of the discovery of NGF paying particular regard to the work of Montalcini and Hamburger [DOI: 10.1080/09647040500536558]

Rimpau W (2009): Theory of cognition and natural philosophy in neurology. The principle of localization in the debate between Viktor von Weizsäcker, Kurt Goldstein, and Otfried Foerster in 1930. *Nervenarzt.* 80: 970-4. (In German). A review of the debate on the possibility of *neuroscientific* accounts of cognition within 1930s Germany

Rothstein TL, (2008) A brief history of surgical therapies for Parkinson Disease: how science and serendipity contributed to advances in the surgical treatment of Parkinson Disease. *Neurosurgery Quarterly* 18: 121-125. A brief review of surgical treatments before the 1960's

Rottleb U, Steinberg H (2007): The Möbius-Foundation – a source-based study in the history of promoting psychiatric and neurological research. *Psychiatr. Prax.* 34: 188-93. A history of the foundation set up in 1907 to honour achievements in neurology and psychiatry and whose history (it is argued) mirrors the social changes in Germany and German psychiatry in the first half of the twentieth century

Rovit RL, Simon AS, Couldwell (2008): Patton: death of a soldier. *Journal of Neurosurgery* 108:402-408. Patton suffered a fractured C3 vertebra and posterior dislocation of C-4 on C-5 as a result of a car crash; the likely cause of death was pulmonary embolus. Details of his medical treatment are compared with therapies that a patient with a similar injury would receive today.

Ryan RW, Spetzler RF, Preul MC (2009): Aura of technology and the cutting edge: a history of lasers in neurosurgery. *Neurosurg. Focus* 27: E6 [DOI: 10.3171/2009.6.FOCUS09125]. A review of the development of laser neurosurgery emphasising the interplay between surgery and technology

Sammet K (2008): Alfons Jakob (1884-1931). *J.Neurol.* 255: 1852-1853. A short biography of Jakob best known for his histopathological studies of mental illness

Santaren, JF, Sanchez-Ron, JM (2009): Science and Politics: Ramon y Cajal's Intervention in Giuseppe Levi's 1934 Liberation. *J.Hist.Neurosci.* 18: 137-49. This paper discusses three letters written by Spanish scientists regarding the imprisonment of the Italian histologist Giuseppe Levi and indicate that the controversy about collaterals between Golgi and Cajal was still ongoing at this time

Sarikcioglu L (2007): Otfried Foerster (1873-1941): one of the distinguished neuroscientists of his time. *J.Neurol. Neurosurg.Psychiatry* 78: 650. A neurologist and neurosurgeon Foerster is best known for his eponymous operation (Foerster's operation), for his cytoarchitectonic map of the cerebral cortex and as V.I.Lenin's neurologist.

Sarkcioglu L, Sindel M (2007): Pierre Mollaret (1898-1987) and his legacy to science. *J. Neurol Neurosurg Psychiatry* 78: 1135. Mollaret made significant contributions to both neurology and epidemiology and this short article provides a scientific biography.

Sarikcioglu L, Ozsoy U (2008): Bror Rexed (1914-2002). *J.Neurol.* 255: 1998-1989. An obituary of the visionary Swedish neuroscientist best-remembered for his description of the spinal cord cell systems now known as Rexed's lamination.

Sarikcioglu K, Utuk A (2009): Birdsey Renshaw (1911-1948) and his eponym. *J. Neurol Neurosurg Psychiat.* 80 : 79. A brief biography of Birdsey Renshaw who died tragically early in 1948 and a history of the eponymous cell.

Satran R (2007): G.I.Rossolimo (1860-1928) neurologist and Public Benefactor. *J.Hist.Neurosci* 16: 65-73. Rossolimo established the first children's institute for neurology and psychology in Russia and developed techniques for assessing cognitive function

Sedvall, G (2007): A quest for antipsychotic drug actions in the brain: personal experience from 50 years of neuropsychiatric research at Karolinska Institutet. *Physiol.Behav.* 92: 238-44. A personal account of the author's training and research career at the Karolinska Institute emphasising the importance of integrating basic and clinical neuroscience.

Shelton BA, O'Hara E, Tubbs RS, Shoja MM, Barker FG, Cohen-Gadol AA. (2009): Emergency suboccipital decompression for respiratory arrest during supratentorial surgery: the untold story of a surgeon's courage in times of despair. *J.Neurosurg.* 110: 391-394 . A description of emergency surgery of the posterior fossa during supratentorial surgery hailing Cushing's understanding of the brain herniation syndromes and his surgical courage.

Shevell, M (2009): The tripartite origins of the tonic neck reflex: Gesell, Gerstmann, and Magnus. *Neurology* 72: 850-3. Three leaders of early 20th century neuroscience (Rudolf Magnus, Josef Gerstmann, and Arnold Gesell) elaborated different aspects of this primitive reflex and this paper reviews their work

Shillito J, Black PM (2008): The Harvard Neurosurgical Service at the Children's Hospital Boston and Brigham & Women's Hospital, 1912-2007. *Neurosurgery* 63: 579-93; discussion 593. A review of the first 94 years of service in clinical, educational, political and research areas of neurosurgery.

Shoja MM, Tubbs RS (2007): Augusta Déjerine-Klumpke: the first female neuroanatomist. *Clin.Anat.* 20: 585-7. A review of the current French and English literature concerning Augusta Déjerine-Klumpke (1859-1927), the first woman intern in a Parisian hospital and the first to contribute directly to the writing of a neuroanatomy textbook.

Shorvon SD (2009): A history of neuroimaging in epilepsy 1909-2009. *Epilepsia.* 50 Suppl 3:39-49. Profound advances in the field of clinical imaging in epilepsy occurred between 1909 and 2009, the century of the International League Against Epilepsy, and these are reviewed briefly in this paper.

Shorvon SD (2009) Drug treatment of epilepsy in the century of the ILAE: the first 50 years, 1909-1958. *Epilepsia.* 50 Suppl 3: 69-92. This paper provides a review of the drug treatment of epilepsy from 1909, the year of the foundation of the International League Against Epilepsy (ILAE), to 1958.

#Shorvon SD (2009): Drug treatment of epilepsy in the century of the ILAE: the second 50 years, 1959-2009. *Epilepsia 50 Suppl 3*:93-130. Advances in therapeutics included the incorporation of pharmacokinetics into clinical practice, enormous advances in neurochemistry, a trend to antiepileptic drug monotherapy, better drug assessment, better understanding of therapeutic outcomes, and the recognition of the large epilepsy treatment gap that occurred in many countries during this period. To what extent all this resulted in better prognosis of the condition is 'an interesting and perplexing question'.

Shorvon SD, Weiss G, Goodkin HP.(2009): Notes on the origins of *Epilepsia* and the International League Against Epilepsy. *Epilepsia 50*:368-76. The recent discovery of archival material has shed interesting light on the origins of *Epilepsia* and also on the origins of the International League Against Epilepsy (ILAE) and this paper discusses these findings.

Sirotkina I (2007): Mental Hygiene for Geniuses: Psychiatry in the Early Soviet Years. *J.Hist.Neurosci. 16*: 150-9. This article traces the project to establish an Institute to study 'ill-adapted' geniuses mooted by the psychiatrist Segalin (1878-1960) from its beginnings to its termination in the early 1930s

Skalski JH, Gładki M, Pyplacz D (2007): The celebrity of Polish and French medicine-- Józef Julian Franciszek Feliks Babiński (1857-1932). *Pol Arch Med Wewn.117*: 327-30. A biography of the famous Polish-French neurologist who at the end of his life expressed his pride in having two home countries '...to one I owe knowledge, to the other, the country of my ancestors, the elements of my Polish soul..' (in Polish).

Snyder SH (2009): Neurotransmitters, receptors, and second messengers galore in 40 years *J Neurosci. 29*: 12717-21. [DOI:10.1523/JNEUROSCI.3670-09.2009]. To celebrate the 40th anniversary of the Journal this essay highlights a selected group of particularly notable discoveries, emphasizing seminal findings that have transformed thinking in the field.

Sonntag VK (2007): The development of spinal neurosurgery: historical perspective. *Neurosurgery 60*: 587-8. A brief review of the development of spinal neurosurgery, mainly in the USA, over the last half century followed by two further short reviews by RG.Fessler and E.C.Benzel.

Sourkes TL (2007): Thudichum's Successors. *Neurochem Res.32*: 1808-12. A review of the work of five scientists who, among others, carried forward to work of Thudichum after his death in 1901.

Sourkes TL (2009): Acetylcholine – From Vagusstoff to cerebral Neurotransmitter. *J.Hist.Neurosci, 18*: 47-58. The rise of the Nazi regime in Germany caused many of those involved in the development of a knowledge of vagusstoff/Ach to emigrate to North America and this paper reviews their contributions.

Spiotta AM, Bain MD, Lautzenheiser FK, Barnett GH (2009): Neurological surgery at the Cleveland Clinic: a historical perspective. *Neurosurgery 64*:164-70; discussion 170-1. A history of one of the largest and most specialised departments of neurosurgery in the USA.

Squire LR (2009): The legacy of patient H.M. for neuroscience. *Neuron. 61*: 6-9. H.M. is probably the best known single patient in the history of neuroscience. His severe memory impairment, which resulted from experimental neurosurgery to control seizures, was the subject of study for five decades until his death in December 2008.

Squire LR (2009): Memory and brain systems: 1969-2009. *J Neurosci.* 29:12711-6. [DOI:10.1523/JNEUROSCI.3575-09.2009]. A comprehensive and extensively referenced review to mark the 40th anniversary of the Journal

Steinberg H (2008): Oswald Bumke in Leipzig. Beyond Kraepelin, Freud and Rüdin's Entartungslehre. *Nervenarzt.* 79: 348-56. In the early part of the twentieth century Bumke exerted a considerable influence of German neuropsychology but owing to the political situation in mid-century was unable to gain much support from his colleagues (In German)

Steinberg H, Wagner A (2008): Hans Steinert: 100 years of myotonic dystrophy. *Nervenarzt* 79: 961-2, 965-70. This study includes a detailed biography of Hans Steinert (1875-1911) who was the first (1909) to describe myotonic dystrophy (Steinhert's disease) as an independent entity. (in German)

Steinberg H (2009): Erwin Gustav Niessl Mayendorf (1873-1943). *J.Neurol.* 256: 843-44 A short life of a neurologist who fell foul of the Nazi regime and was forced into retirement in 1937.

Storey GO (2009): Walter Russell Brain (1895-1966), Baron Brain of Eynsham, Lord Brain MA DM DSc LLD DCL FRCP FRCS FRCOG FRCPEd. FRCP.Glas FRACP FACP FCPSA FRS. *J.Med.Biogr.* 17: 30-4, A detailed, illustrated, account of Walter Russell Brain, writer, neurologist, chairman of many committees and fellow of many societies.

Strata P.(2009): David Marr's theory of cerebellar learning: 40 years later. *J Physiol.* 587: 5519-20. [DOI:10.1113/jphysiol.2009.180307]. It is argued that Marr should be recognised as having contributed substantially to creating the discipline of computational neuroscience.

Strotzer M (2009): One century of brain mapping using Brodmann areas. *Klin Neuroradiol.* 19:179-86. On the centenary of the publication of his maps the life and work of Korbinian Brodmann is reported, the core functions of each Brodmann area are described and Brodmann's views on neuropsychological processes are depicted.

* Swanson LW, Grant G, Grillner T, Hökfelt T, Jones EG, Morrison JH (2007): A century of neuroscience discovery: reflecting on the Nobel Prize awarded to Golgi and Cajal in 1906. *Brain Res. Rev.* 55: 191-3. An introduction to an issue devoted to the proceedings of the Cajal club at its centenary symposium in the Karolinska Institute in June 2006. The issue includes much fascinating neurohistory – see separate entries.

Szirmai I (2008): Neurology of cognition and language in the publications of Kálmán Sántha and today. *Orv Hetil.* 149: 825-30. Sántha's (1902-1956) troubled career included seminal work on the localisation of aphasia. This paper discusses that work. (In Hungarian)

Taylor J., Handa A (2007): Hugh Cairns and the origin of British neurosurgery. *Br.J.Neurosurgery* 21: 190-6. A review of Cairns' early life and training with Cushing, his character and administrative prowess, and his role in establishing neurosurgery in London and the saving of thousands of lives in world war 1.

Tansey, EM (2008): Working with C. S. Sherrington, 1918-24. *Notes Rec. R. Soc.* 62:123-30. An interview with T.J.Sulman who worked as a technician with Sherrington at Oxford from 1918 to 1924 and then moved to Cardiff as a senior technician

Tansy, EM (2008): Working with Cambridge physiologists. *Notes Rec. R. Soc.* 62: 131-37. An interview by Tansy and Silver with Clive Hood who worked as a technician in Cambridge first with E.D.Adrian and then with W.Rushton and F.Campbell

Teive HA, Munhoz RP, Barbosa ER (2009): Professor Karl-Axel Ekbom and restless legs syndrome. *Parkinsonism Rel.Disord.* 15: 254-7. The authors provide an historical review of restless legs syndrome, emphasizing the contribution of Professor Karl-Axel Ekbom, the Swedish neurologist who made the first detailed clinical description of this disease.

Tfelt-Hansen PC, Koehler PJ (2008): History of the use of ergotamine and dihydroergotamine in migraine from 1906 and onward. *Cephalalgia* 28: 877-86. Dale showed in 1906 that ergot inhibits the pressor effect of adrenaline and this paper follows the history of its use in migraine treatment into the twenty-first century.

Todman DH (2007): John Newport Langley (1852-1925) http://www.ibro.info/Pub/Pub_Main_Display.asp?LC_Docs_ID=2572
Langley succeeded Foster in the Chair of Physiology at Cambridge in 1903 and is mainly remembered for his work in neuropharmacology, for coining the term 'autonomic nervous system' and for his large text on that topic published in 1921 and this article summarises his scientific career.

Todman, DH (2008): Silas Weir Mitchell: Pioneer in neurophysiology and clinical neurology. *IBRO History of Neuroscience* http://www.ibro.info/Pub/Pub_Main_Display.asp?LC_Docs_ID=3203
A biography of Weir Mitchell (1829-1914) often regarded as one of the founders of American neurology including an assessment of his contributions to fiction and poetry

Todman D (2008) H.Houston Merritt (1902-1979). *J. Neurol.* 255: 1278-1279. One of the most significant academic neurologists of the 20th century who, working at the Neurological Institute of New York, exerted a major influence on the growth of the discipline.

Todman D. (2008): Wilder Penfield (1891-1976). *J Neurol.* 255:1104-5. A brief review of the life and work of one of the leading neurosurgeons of the twentieth century, first director of the Montreal Neurological Institute, who pioneered the incorporation of neurophysiological principles into neurosurgery.

Todman D (2008): Henry Dale and the discovery of chemical synaptic transmission. *Eur Neurol.* 60: 162-4.. An account of the controversy between advocates of electrical and chemical transmission at the synapse

Todman D (2008): Henry Woltman (1889-1964): pioneering American neurologist. *J Med Biogr.* 16:162-6. The first neurologist at the Mayo Clinic, Woltman was largely responsible for the great expansion of this speciality at the Clinic in the early twentieth century.

Todman D (2008): John Eccles (1903-97) and the experiment that proved chemical synaptic transmission in the central nervous system. *J Clin Neurosci.* 15:972-7. An account of one of the 'pivotal' experiments in neuroscience

Todman, D (2009): Otto Loewi (1873-1961). *J.Neurol.* 256: 291-2. Loewi's work was pivotal in establishing that nerve cells communicate with a chemical substance and this paper provides a short biography and review of his scientific accomplishments.

Toledo-Pereyra LH (2008): Innovation according to Cushing. *J. Invest. Surg.* 21: 97-100. Details of Cushing's innovative contributions to neurosurgery within the context of his personality and the development of his speciality are discussed.

Triarhou LC (2009): Alfons Maria Jakob (1884-1931), neuropathologist par excellence. Scientific endeavors in Europe and the Americas. *Eur Neurol.* 61:52-8. Epub 2008 Nov 25. Jakob is mainly remembered by neurologists for the spongiform encephalopathy with progressive dementia and spasticity that he, and Kiel neuropathologist Hans Gerhard Creutzfeldt (1885-1964), described independently. But he left many other contributions to neuroanatomy, neuropathology and neuropsychiatry in the form of original articles and valuable monographs

Triarhou LC, Vivas AB (2009): Poetry and the brain: Cajal's conjectures on the psychology of writers. *Perspect Biol Med.* 52: 80-9.
An English translation of Cajal's 1902 essay on the psychophysiology of literary art.

Triarhou LC (2007): Constantin von Economo (1876-1931)
<http://www.ibro.info/Pub/Pub_Main_Display.asp?LC_Docs_ID=2767>
A beautifully illustrated and well-referenced account of the life and scientific career of the joint author with Koskinas of the (1925) *Atlas of Cytoarchitectonics*

Triarhou, LC (2007): Mikhail B.Kroll (1879-1939). *J.Neurol.* 254:266-7. An account of the life and work of Kroll the founder of Belarusian neurology and author of an important book on neuropathological syndromes

Triarhou, LC (2007): Constantin von Economo (1876-1931). *J.Neurol.* 254: 550-1. A short account of von Economo's scientific career and accomplishments

Triarhou LC, (2007): Edward Flatau (1868-1932). *J.Neurol.* 254: 685-6. A brief account of the founder of Polish neurology and an early champion of Cajal's neuron doctrine

Triarhou LC, de Cerro M (2007): Christfried Jakob (1866-1956). *J.Neurol.* 254: 124-5. Not to be mistaken for the Jakob of Jakob-Creutzfeldt disease, Christfried Jakob was born in Bavaria but emigrated to Argentina where he was instrumental in founding the Argentinian school of neurology.

Triarhou LC (2008): Centenary of Christfried Jakob's discovery of the visceral brain: an unheeded precedence in affective neuroscience. *Neurosci Biobehav Rev.* 32: 984-1000. It is argued that Jakob was the first to identify the 'visceral brain' and many of its key components and this conclusion is supported by the first English translations of relevant passages from his writings.

Trobe JD (2007): Simmons Lessell: the Gaon of neuro-ophthalmology. *J.Neuro-ophthalmol* 27: 61-74. An extended interview with Simmons Lessell (b.1933) the Gaon (learned-one) of neuro-ophthalmology

Tsagareli MG (2007): Ivane Beritashvili: Founder of Physiology and Neuroscience in Georgia. *J.Hist.Neurosci.* 16: 288-306. A biographical account of the Georgian physiologist, Beritasvili (1884-1974), founder of the Department of Physiology and the Institute of Physiology at the University of Tbilisi who showed that animal psychoneural behaviour was driven by image-driven memory. [DOI: 10.1080/09647040600600148]

Tsapkini K, Vivas AB, Triarhou LC (2008): 'Does Broca's area exist?' Christofredo Jakob's 1906 response to Pierre Marie's holistic stance. *Brain Lang.*105: 211-9 A translation of Jacob's paper written in response to the 1906 debate on language localisation with a discussion of his ideas on the rôle of Broca's area which the authors believe is still relevant to contemporary discussions

Urculo-Bareño E (2009): History of neurosurgery at the provincial hospital of Guipuzcoa. *Neurocirurgia (Astut)* 20:163-75. The development of neurosurgery at Guipuzoca from 1960 until its absorption into the Donostia Hospital. (In Spanish)

Van Gijn J (2009): The first brain surgeries in the Netherlands. *Ned Tijdschr Geneeskd.* 153:412-7 (No abstract available)

Vein AA (2008): Science and Fate: Lina Stern (1878-1968), A Neurophysiologist and Biochemist. *J.Hist.Neurosci* 17: 195-206. Stern founded the Moscow Institute of Physiology in 1929 and was director until 1948; a devoted scientist she is best remembered for her work in the blood-brain barrier. [DOI: 10.1080/09647040601138478]

Verhey FR (2009): Alois Alzheimer (1864-1915). *J Neurol.* 256: 502-3. Epub 2009 Mar 18. An account of Alzheimer and his discovery and the publication of his work on his eponymous disease

#Voorhees, JR, Tubbs RS, Nahed, B, Cohen-Gadol, AA (2009): William S. Halsted and Harvey W. Cushing: reflections on their complex association. *J Neurosurg.* 110: 384-90.. An extensive and well-illustrated analysis of the relations between two great masters. The attached comments (pp. 382-4) of Michal Bliss are very important.

Wagner A, Steinberg H (2008): Hans Steinert (1875-1911). *J.Neurol.* 255: 1607-1608. An obituary of Steinert who gave the first proper description of myotonic dystrophy in 1909

Wahl CJ, Tubbs RS, Spencer DD, Cohen-Gadol AA (2009) Harvey Cushing as a book collector, bibliophile and archivist: the precedence for the genesis of the brain tumor registry: historical vignette. *J Neurosurg* 111: 1091-1095. [DOI: 10.3171/2008.7.JNS08511]. The title tells it all.

Wallesch CW (2007): Otto Foerster (1873-1941): German neurologist, neurosurgeon and system physiologist. *Cortex* 43: 491-3. See Sarikcioglu (2007) above

Wade NJ (2007): Alzheimer's memory. *Perception* 36: 1111-1114. Perceptual portraits of Alzheimer, Kraepelin and Nissl are presented. Alzheimer is shown together within a pattern of neurofibrillary tangles derived from his recently rediscovered micrographs.

Weinstein JS, Burchiel KJ (2009) Dandy's disc. *Neurosurg* 65: 201-205 [DOI: 10.1227/01.NEU.0000346267.60064.3D]. The authors present evidence that Dandy was the first to describe herniation of the intervertebral disc with pathological findings and operative treatment.

White RJ (2009): Lenin's brain. *J Neurosurg.* 110: 1327-8. A short review of Lenin's death in 1924 and details of the subsequent examination of his brain

Wierzbicki AS, Lloyd MD (2007): Dr Brian Gibberd (1931-2006): a pioneering clinician in Refsum's disease. *Biochem Soc Trans.* 35: 862-4. An obituary which outlines Gibberd's many achievements in neurology and especially the treatment of peroxisomal disorders.

Will B, Dalrymple-Alford J, Wolff M, Cassel JC (2008): The concept of brain plasticity--Paillard's systemic analysis and emphasis on structure and function (followed by the translation of a seminal paper by Paillard on plasticity). *Behav Brain Res* 192: 2-7. A discussion of the prescient paper on brain plasticity published by Paillard in 1976 with an English adaptation

Williams DR, LeesAJ, Wherrett JR et al. (2008): J. Clifford Richardson and 50 years of progressive supranuclear palsy. *Neurology* 70: 566-73. The article traces the events leading to Richardson's description of progressive surpanuclear palsy (PSP) in 1963 and suggests that in view of his seminal observations it should be renamed Richardson's disease

Wurtz RH (2009): Recounting the impact of Hubel and Wiesel. *J Physiol.* 587: 2817-23. [DOI:10.1113/jphysiol.2009.170209]. A review of the impact of Hubel and Wiesel's work to commemorate the 50th anniversary of their initial publication

Yasnitsky A, Ferrari M (2008): From Vygotsky to Vygotskian Psychology: Introduction to the history of the Kharkov School. *J.Hist.Behav.Scis* 44: 119-145. This paper shows that Vygotsky's work was not forgotten in the USSR after his early death in 1934 until rediscovered by Russia and America in the 1950s but morphed into what has become known as the Kharkov School of neuropsychological research.

Yildirim FB, Sarikcioglu L (2008): Augusta Déjerine-Klumpe (1859-1927) and her eponym. *J. Neurol. Neurosurg. Psychiatry* 79: 102. A brief biography of the pioneering French neurologist and neuroanatomist

York GK (2009): Localisation of Language Function in the Twentieth Century. *J.Hist.Neurosci.* 18: 283-90. At the beginning of the twenty-first century localisation of aphasia remains controversial and this paper provides a short review of twentieth-century debates.

Young AB (2009): Four decades of neurodegenerative disease research: how far we have come! *J Neurosci.* 29:12722-8. [DOI:10.1523/JNEUROSCI.3767-09.2009]. This review, marking the 40th anniversary of the *Journal*, shows the remarkable growth of the field: 40 years ago, for instance, *PubMed* listed only three articles on AD, today several thousand.

Zago S, Ferrucci R, Fregni F, Priori A (2008): Bartholow, Sciamanna, Alberti: pioneers in the electrical stimulation of the exposed human cerebral cortex. *Neuroscientist.* 14: 521-8. A review of the pioneering experiments on brain stimulation carried out by the three investigators

of the title who were the first to reproduce in humans the findings made by electrical stimulation of animal brains.

Zeman A (2007): Sherrington's philosophical writings – a 'zest for life'. *Brain* 130: 1984-7. Although Sherrington's neurophilosophy is often regarded as dualistic this paper argues that he was 'deeply uneasy' with this idea and that he remained until the end open-minded and wary of dogmatic solutions.

Zhang Y, Zhang JH (2008): Dr Chung-Cheng Wang and Beijing Neurosurgical Institute. *Neurol Res.* 6: 550-1. A brief account of Chung-Chen and the development of modern Chinese neurosurgery.

Zifkin BG, Avanzini G (2009): Clinical neurophysiology with special reference to the electroencephalogram. *Epilepsia.* 50 Suppl 3:30-8. A review of the discovery of the EEG by Hans Berger, its subsequent development and clinical importance

Thematic

Albano C (2008): The puzzle of human emotions: some historical considerations from the 17th to the 19th centuries. *Dev Med Child Neurol.* 50: 494-7 This review describes how the concept of emotion developed in Western thought from the Renaissance notion of the passions to the 19th century idea of 'emotion'.

Amirov NK, Bogdanov EI, Guryleva ME, Zefirov AL, Ismagilov MF, Mukhamedzyanov RZ, Sozinov AS (2007): The History of the Kazan Neurological School. *J.Hist.Neurosci.* 16: 110-122. The teaching of physiology at Kazan University commenced in 1806 and this paper reviews the foundation and teaching of neurology from the mid-nineteenth century onwards with brief biographies of its major representatives.

Baig MN, Chishty F, Immesoete P, Karas CS (2007): The Eastern heart and Galen's ventricle: a historical review of the purpose of the brain. *Neurosurgical Focus* 23: E3 A review of ancient texts of both Eastern and Western societies as well as modern writings on the organic counterpart to the soul.

Bennett MR (2007): Development of the concept of mind. *Aust.NZ J.Psychiatry* 41: 943-56. A short account of the development of the concepts of soul, mind and brain with special reference to neuropsychiatry from early antiquity until contemporary times

#Berlucchi G, Buchtel HA (2009): Neuronal plasticity: historical roots and evolution of meaning. *Exp Brain Res.* 192: 307-19. Epub 2008 Nov 12. An outline of some important milestones in the history of the term "plasticity" in reference to the nervous system showing how an analysis in depth can help to reduce some of the confusion engendered by the unrestricted use of the concept and term.

Butler MA, Corboy JR, Filley CM (2009): How the conflict between American psychiatry and neurology delayed the appreciation of cognitive dysfunction in multiple sclerosis. *Neuropsychol Rev.* 19: 399-410. [DOI: 10.1007/s11065-009-9089-y]. It is argued that

a conflict between psychiatrists and neurologists over the control and treatment of the mentally ill hindered the treatment of MS.

Cappabianca P, de Divitis E (2007): Back to the Egyptians: neurosurgery via the nose. A five thousand year history and the recent contribution of the endoscope. *Neurosurg. Rev.* 30: 1-7. A review of the origin and twentieth century development of this technique and its use for treatment of pituitary tumours

#Cassedy, S (2008): A History of the Concept of the Stimulus and the Role it Played in the neurosciences. *J.Hist.Neurosci.* 17: 403-432. An account of the use of the term 'stimulus' from the sixteenth to the beginning of the twenty-first century with a discussion of the slow shift in the denotation of the term

Clarac F (2008): Some historical reflections on the neural control of locomotion. *Brain Res. Rev.* 57:13-21. Although interest in the neural control of locomotion dates back to antiquity, this paper starts in the seventeenth century and reviews salient developments into the late twentieth century

Devinsky O, Lai G (2008): Spirituality and religion in epilepsy. *Epilepsy Behav.* 12: 636-43. Throughout history epilepsy has been linked with the supernatural and this paper reviews that history and provides a modern analysis of that linkage.

Dolan B (2007): Soul searching: a brief history of the mind/body debate in the neurosciences. *Neurosurgical Focus* 23:E2, A review of the subject from ancient to modern times.

Donovan WH (2007): Donald Munro Lecture. Spinal cord injury – past, present, and future. *J.Spinal Cord Med.* 30: 85-100. A review of spinal cord injury from antiquity to the present, taking in the injuries of Horatio Nelson, President Garfield and General Patton, and ending with an account of present advances

Dubowitz V (2009): Ramblings in the history of spinal muscular atrophy. *Neuromuscul Disord.* 19: 69-73. Epub 2008 Oct 31. After a short introduction this paper discusses a number of classical papers in spinal muscular atrophy

Eadie MJ (2009): Experimental epileptology before 1900. *Epilepsia* 50: 377-86. Accounts in English and other major Western European languages are reviewed and it is concluded that the pre-1900 work not only laid the foundations for 20th century experimental studies but also advanced the understanding of the causes of epileptic seizures.

#Eboli, P, Stone, J., Aydin S., Slavin KV (2009): Historical characterization of trigeminal neuralgia. *Neurosurg.* 64: 1183-1186. The earliest good descriptions of the ailment are found in the 17th and 18th centuries. There are, however, yet earlier accounts. This paper reviews the history from the earliest times until the 20th century.

Ffytche DH (2007): Visual hallucinatory syndromes: past, present and future. *Dialogues Clin.Neurosci.* 9: 173-89. A history of visual hallucinatory syndromes together with an account of advances in perceptual neuroscience

Foley P (2007): Succi nervorum: a brief history of neurochemistry. *J Neural Transm Suppl.* 72 :5-15. Although chemical investigation of brain tissue can be traced back as far as Hensing's 1719 *Cerebri examen chemicum* the study of chemical transmitters only began in earnest in the 1940s and this paper reviews this later work.

Fountas KN, Smith JR (1970): Historical evolution of stereotactic amygdectomy for the management of severe aggression. *J.Neurosurg.* 106: 710-3. An account of the development of stereotactic amygdectomy from the pioneering work of Franz Goltz on animals in the 1890s to modern developments involving neuroimaging.

Friedman AH (2009): An eclectic review of the history of peripheral nerve surgery. *Neurosurgery* 65(4 Suppl): 3-8. [DOI: 10.1227/01.NEU.0000346252.53722.D3]. A review of three aspects of the history of peripheral nerve surgery: regain of function, regeneration, resection of neuronomas

Geranmayeh F, Ashkan K (2008): Mind on Canvas: anatomy, signs and neurosurgery in art. *Br J Neurosurg.* 22: 1-12. Beginning with a discussion of the general relationship between neuroscience and art as depicted in paintings and drawings, this article provides a rather casual selection of paintings on neurosurgical themes in different historical periods

Gerstad L, Gilhus NE, Storstein A (2008): A retrospective view on research in neuroscience in Norway. *Acta Neurol Scand Suppl.* 188: 3-5. A brief historical review of research in neuroscience in Norway shows a comparatively high level of activity with many important results

#Glickstein M, Strata P and Voogd J (2009): Cerebellum: A History. *Neuroscience*, 162: 549-559. [DOI:10.1016/j.neuroscience.2009.02.054]. A detailed history of the cerebellum from the beginnings to relatively recent times with special reference to its functioning

Gross AG (2008): The Brains of Brain: the Coevolution of Localization and its Images. *J.Hist.Neurosci.* 17: 380-92. Images of brain localisation in Brain from its inception in the late 19th century to the present are analysed and it is concluded that 'the brain functions so precisely localised are just those that are not constitutive of our humanity.' [DOI: 10.1080/09647040701423705]

Heary RF, Madhavan K (2008): The history of spinal deformity. *Neurosurgery.* 63 (3 Suppl): 5-15. Spinal deformity is one of the oldest diseases known to humankind (documented earlier than 1800 BCE) and this paper reviews the history of its treatment into present time.

Keesey J, Aarli J (2007): Something in the Blood? A History of the Autoimmune Hypothesis regarding Myasthenia Gravis. *J.Hist.Neurosci.* 16: 395-412. From the first descriptions in the late nineteenth century it has been suspected that MG was due to some factor in the circulation and this paper follows the intricate history of this idea up to the present understanding of MG as an autoimmune disease.

Koehler PJ, Wijdicks EF (2008): Historical study of coma: looking back through medical and neurological texts. *Brain* 131: 877-89. The understanding and clinical examination of coma has evolved over many decades and this paper reviews the accounts given in medical texts published between 1640 and 1960

Lanska DJ (2009): Historical perspective: neurological advances from studies of war injuries and illnesses. *Ann Neurol* 66: 444-59. [DOI: 10.1002/ana.21822]. An account of the work of clinicians and physiologists on wounded patients during the Russo-Japanese war and during world wars 1 and 2 with special reference to peripheral nerve injuries

Lasak JM, Gorecki JP (2009): The history of stereotactic radiosurgery and radiotherapy. *Otolaryngol Clin North Am.* 42: 593-9. Stereotactic neurosurgery originates in the early twentieth century and this article reviews its development paying particular attention to the development of the gamma knife by Lars Leksell in Sweden.

Lichterman B (2007): Emergence and Early Development of Russian Neurosurgery (1890s-1930s). *J.Hist.Neurosci.* 16: 123-137. An account of the difficult and complicated birth of neurosurgery in Russia and the Soviet Union.

López-Muñoz F, Alamo C (2009): Historical evolution of the neurotransmission concept. *J Neural Transm.* 116: 515-33. Epub 2009 Apr 7. A review of the neurotransmission from classical antiquity to the 21st century

#Lorusso L (2008): Neurological Caricatures since the 15th Century. *J.Hist.Neurosci.* 17: 314-34. A beautifully illustrated account of the use of caricature in neuroscience since the 15th century [DOI: 10.1080/09647040802132023]

Magiorkinis E, Diamantis A, Mitsikostas DD, Androutsos G (2009): Headaches in antiquity and during the early scientific era. *J Neurol.* 256:1215-20. [DOI: 10.1007/s00415-009-5085-7]. Observations on headaches span a timeline of nearly 9 000 years and this review covers that period with special emphasis on the 18th and 19th centuries.

Mangina CA (2009): Historical milestones of neuroscientific psychophysiology. *Int J Psychophysiol.* 73: 76-80. [DOI:10.1016/j.ijpsycho.2009.04.008]. The growth of psychophysiology throughout the last century is traced with reference to significant 'milestones'.

Mastronardi L, Ferrante L (2009) Neurosurgery in Italy: the past, the present the future. *Neurosurgical Review* 32: 381-386 [DOI: 10.1007/s10143-009-0206-4] A very short review from the beginning in classical antiquity until modern times.

Millichap JJ, Millichap JG (2009): Child neurology: Past, present, and future: part 1: history. *Neurology* 73: e31-3 [DOI: 10.1212/WNL.0b013e318b2a6df]. A review of the development of pediatric neurology from the late nineteenth to the beginning of the twenty-first century.

Monaco F, Servo S, Cavanna AE (2009): Famous people with Gilles de la Tourette syndrome? *J Psychosom Res.* 67:485-90. [DOI:10.1016/j.jpsychores.2009.07.003]. Two famous instances are reconsidered, Samuel Johnson and Wolfgang Amadeus Mozart: diagnosis of GTS in the first case is considered sound, in the second doubtful.

Moran NF (2008): A more balanced and inclusive view of the history of temporal lobectomy. *Epilepsia* 49:543-4. A letter emphasising that many workers in addition to Penfield and Jaspers at the MNI were involved in the quest for a surgical cure for temporal lobe epilepsy

Murray TJ (2009): The history of multiple sclerosis: the changing frame of the disease over the centuries. *J.Neurol.Sci.* 277 Suppl 1: S3-8. An historical account of the condition from ancient times through the nineteenth and twentieth centuries until the present time.

Obiols JE, Berrios GE (2009): The historical roots of Theory of Mind: the work of James Mark Baldwin. *History of Psychiatry* 20: 377-392. [DOI: 10.1177/0957154X08337334]. Although he fell out of favour in the early twentieth century, Baldwin (1861-1934) was influential in the origins of naturalistic 'theories of mind' and influenced Piaget's later work. He is gradually being rediscovered.

Papalia I, Geuna S, D'Alcontres FS, Tos P (2007): Origin and history of end-to-side neurorrhaphy. *Microsurgery* 27: 56-61. The origin of end-to-side neurorrhaphy is usually dated to the beginning of the twentieth century (although publications on the technique can be found as far back as 1873) and a number of interesting clinical and experimental studies were carried out in the last century. This paper reviews this previously rather obscure history.

Pearce JM (2007): A brief history of sciatica. *Spinal Cord* 45: 592-6. Using selected, original quotations and a historical review from the 18th to mid-20th century, this paper appraises the several steps leading to modern concepts of the neurological basis of sciatica.

Pearce JM (2008): The development of spinal cord anatomy. *Eur. Neurol.* 59:286-91. An illustration of spinal cord injury in a dying lioness dates from 650BCE and this paper outlines the subsequent development of knowledge of the anatomy of the cord into contemporary times

Pearce JMS (2009): Links between nerves and glands: The story of adrenaline. *ACNR*, 9: 22-28. A review of the development of knowledge of adrenaline and neurotransmission from the sixteenth to the mid-twentieth century

Powell M, Kitchen N (2007): The development of neurosurgery at the National Hospital for Neurology and Neurosurgery, Queen Square, London, England. *Neurosurgery* 61:1077-90. The history of neurosurgery at Queen Square is described from the time of Horsley until the present and plans for future developments are elucidated.

Powers CJ, Friedman AH (2007): A brief history of surgery for peripheral nerve sheath tumours. *Neurosurg. Focus* 22: E1. A selective history from ancient times to the present showing that it was not until the twentieth century that efficacious treatments for these conditions could be and were developed.

Raichle ME(2009): A paradigm shift in functional brain imaging. *J Neurosci.* 29:12729-34. [DOI:10.1523/JNEUROSCI.4366-09.2009]. A well-illustrated account of functional brain imaging from the introduction of CT in 1973 to the present day studies at the cell and molecular level

RosnerD, Markowitz G (2007): The politics of lead toxicology and the devastating consequences for children. *Am.J.Ind.Med* 50: 740-56. This article describes the trajectory of industry's attempts to conceal from the public the threat of lead poisoning to children during the 20th century.

Raichle ME (2009): A brief history of human brain mapping. *Trends Neurosci.* 32: 118-26. Epub 2008 Dec 26. Although much brain mapping has been undertaken over the past couple of decades, its roots can be traced back more than a century.

Rot U (2008): Ian McEwan - novels about neurological and psychiatric patients.

Eur. Neurol. 60: 12-15. A discussion of the neurological novels of the well-respected contemporary British novelist.

Sakas DE, Panourias IG, Singounas E, Simpson BA (2007): Neurosurgery for psychiatric disorders: from excision of brain tissue to the chronic electrical stimulation of neural networks. *Acta Neurochir.Suppl.* 97: 365-75 Neurosurgical treatment for psychiatric disorders has a long and controversial history dating back to antiquity and this paper briefly overviews its major milestones.

Salter V, Ramamchandran M (2008): Medical conditions in works of art. *Br. J. Hosp. Med.(Lond.)* 69: 91-4. A review of some paintings suggesting underlying medical conditions under speciality-based headings

#Santoro G, Wood HD, Merlo L, Anestasi GP, Tomasello F, Geromno A (2009): The anatomic location of the soul from the heart, through the brain and beyond: A journey through Western History, science and philosophy. *Neurosurg* 65: 633-643 [DOI: 10.1227/01.NEU.0000349750.22332.6A]. An interesting and thoughtful article. A good reference source.

#Schamahmann JD, Pandya, DN (2007): Cerebral White Matter – Historical Evolution of Facts and notions Concerning the Organisation of the Fiber Pathways of the Brain. *J.Hist.Neurosci.* 16: 237-267. A well-illustrated account of the anatomists and observations underlying the evolution of ideas about cerebral white matter. [DOI: 10.1080/09647040500495896]

Schmahmann JD, Pandya, DN (2007): The Complex History of the Fronto-Occipital Fasciculus. *J.Hist.Neurosci.*, 16: 362-77. A history of the FOF from its identification by Forel and his student Onufrowicz in 1887 through a history of confusing neuroanatomy to it's the contemporary clarity conferred by anterograde tract tracers.

Shterenshis M, Vaiman M (2007): European Influence on Russian Neurology in the eighteenth and Nineteenth Centuries. *J.Hist.Neurosci.*, 16, 6-18. An account of the development of clinical neurology in the 18th and 19th centuries focusing on the European influence on Russian medicine and illustrating the relationship between physiology and practical neurology at the inception of the new discipline.

Simpson DA, Crompton JL (2008): The visual fields: an interdisciplinary history II. neurosurgeons and quantitative perimetry. *J. Clin. Neurosci.* 15: 229-36. A review of the significance of quantitative perimetry as practiced by Cushing and his pupils and its decline after the invention of non-invasive neuroimaging

Smith CUM (2008): Visual thinking and neuroscience. *J.Hist.Neurosci.* 17: 260-73. Three instances are discussed – cortical columns, retina, nerve impulse – and it is argued that visual thinking lies at the core of neuroscientific thought. [DOI: 10.1080/09647040701436475]

*Swanson LW (2006): Quest for the basic plan of nervous system circuitry. *Brain Res. Rev.* 55: 356-72. Starting from Galen and medieval 'cell' theory Swanson reviews the development of modern understanding of neural circuitry up to the beginning of the 21st century with its EM/genetic maps of *C.elegans* and flat-maps of *Rattus rattus* CNSs.

Takagaki (2009): History of neurology in Japan. Interview by Shinichi Takasaka. *Brain Nerve*. 61:1183-9. This and several other articles in *Brain Nerve* discuss historical aspects of Japanese neurology. The articles are in Japanese and most have no abstract.

Takahashi, A (2009): The Japanese Society of neurology. In commemoration of the 50th anniversary of the founding. *Rinsho Shikeigaku* 49: 724-30. This and several other articles in his Journal review the history of Japanese neurology. (In Japanese)

Tancredi LR (2007): The neuroscience of 'free will'. *Behav.Sci.Law* 25: 295-308. A discussion of how advances in neuroscience in the last forty or so years have caused a revisiting of the old debate about free will and responsibility.

Tfelt-Hansen PC, Tfelt-Hansen J.(2009): Nitroglycerin headache and nitroglycerin-induced primary headaches from 1846 and onwards: a historical overview and an update. *Headache*. 49: 445-56. This review traces the evolution of our understanding of NTG headache from its first synthesis in 1846 to the present day.

Thom M (2009): Hippocampal sclerosis: progress since Sommer. *Brain Pathol*.19: 565-72. [DOI: 10.1111/j.1750-3639.2008.00201.x]. William Somer described the characteristic pattern of neuronal loss in HS 120 years ago and this paper traces developments since that time.

Tubbs RS, Loukas M, Shoja MM et al. (2008) The intriguing history of the human calvaria: sinister and religious. *Childs Nerv. Syst.* 24:417-22. A review of the derivation of the term and the misuse and history (from ancient times to the present) of the human calvaria

Tumialan L M, Barrow DL, Tindall SC (2008): The history of neurosurgery at Emory University in Atlanta, Georgia. Institutions and programs. *Neurosurgery* 62:1361-1369. This article actually starts with Crawford Long and ether. It surveys nineteenth and twentieth century institutions in Atlanta. The first trained neurosurgeon at Emory University was Charles E. Dowman, Sr., a protégé of Cushing, who arrived in 1915.

Uluç K, Kujoth GC, Başkaya MK (2009): Operating microscopes: past, present, and future. *Neurosurg Focus* 27: E4. [DOI: 10.3171/2009.6.FOCUS09120]. After a useful review of operating microscopes from the earliest times to the present, the authors discuss what might be found in the operating rooms of the future

Vein, AA (2007): The Moscow Clinic for Nervous Diseases – Walking Along the Portraits. *J.Hist.Neurosci* 16: 42-57. A history of the Moscow Clinic which opened in 1890 and reflects the history of Moscow neurology

Vein AA, Maat-Schieman ML (2008): Famous Russian brains: historical attempts to understand intelligence. *Brain* 131: 583-90. A review of the famous collection of brains at the Moscow Brain Research Institute

Vidal F. (2009): Brainhood, anthropological figure of modernity. *Hist Human Sci.* 22: 5-36. [DOI: 10.1177/0952695108099133]. This article explores the historical development of 'brainhood': the quality or condition of being a brain.

Visser J, Vianney de Jong JMB, Visser M (2008): The history of progressive muscular atrophy: Syndrome or Disease. *Neurology* 70: 723-27. In 1850, a French neurologist, Aran,

described 11 patients with various form of progressive muscular weakness and this paper reviews the development of our understanding of this condition into contemporary times

#Wade NJ (2007): Image, eye and retina. *J.Opt.Soc.Amer. A* 24: 1229-1249. Advances in understanding the initial stages of the visual process are reviewed with respect to the passage of light through the eye, as well as its gross anatomy and microscopic structure. The review covers the period from the early seventeenth to the early twentieth centuries.

Wade NJ (2008): Vision and Visualisation. *J.Hist. Neurosci.* 17: 274-94. An exploration of the development of visual science traced through it's graphical representations

*Webster H, Aström KE (2009): Gliogenesis: historical perspectives, 1839-1985. *Adv Anat Embryol Cell Biol.* 202:1-109. This historical review of gliogenesis begins with Schwann's introduction of the cell doctrine in 1839 and provides a detailed history up to the present time

Whitlock DG (2007): The Cajal club: Its origin, originator and benefactor, Wendell J.S.Krieg. *Brain Res. Rev.* 55: 450-62. The Cajal club was founded in 1947 and its beginnings and early development were led by Wendell J.S Krieg who in the 1980s funded awards for outstanding work on the cerebral cortex and this paper reviews the early years and institution of the awards.

Zahmacioğlu O, Dinç G, Naderi S (2009): The history of psychosurgery in Turkey. *Turk Neurosurg.* 19: 308-14. A review of the clinical, psychometric and histopathological results of psychosurgery performed in Turkey in the 1950s.

Year: 2007 Duration: 02:38:25 Voice: Original Language: English. Audio file. Codec: AC3 Dolby Digital Bit rate: 384 kbps Rate frequency: 48 kHz Channels: 6 channels (L, C, R, Ls, Rs + LFE) Frame rate: PAL (25.000 fps) Size: 436 MB. Download How to free? Download. Hindi Audio track for Alpha 2018 movie and Alice in wonderland 2010, please. #18. Jignesh. | Neurohistory. Quite the same Wikipedia. Just better. Neurohistory is an interdisciplinary approach to history that leverages advances in neuroscience to tell new kinds of stories about the past, but especially of deep history. It was first proposed by Harvard professor Daniel Lord Smail.[1] Other supporters include Lynn Hunt.[2] A methodological discussion and reflection on the co-operation between history and neuroscience are offered by Dieter Langewiesche/Niels Birbaumer.[3] Subsequent commentaries have shown that the idea relies on evolutionary assumptions (notably a blend of exaptation and the Baldwin Effect) and can be extended by. drawing Three stories—the Iraq War, the 2008 election, and the U.S. economy—have dominated the news agenda since PEJ began tracking coverage in 2007. How have those stories ebbed and flowed over time? And look for more of PEJ’s analysis of 2009 news coverage in its newest annual report on the health of American journalism, the State of the News Media 2010. 12.4% Amount of coverage devoted to the U.S. economy from 2007 through 2009. The deep U.S. recession—which erupted into a full-blown crisis with the collapse of Lehman Brothers in September 2008—was the biggest story in the mainstream news media in 2009. It accounted for 20.3% of the overall newshole studied in the News Coverage Index of the Pew Research Center’s Project for Excellence in Journalism.