

justice to what was in its original form a conceptually innovative and empirically pioneering work.

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ALAN GAULD, *A History of Hypnotism*. Cambridge: Cambridge University Press, 1992. Pp. xvii + 738. ISBN 0-521-30675-2. £75.00.

The story of hypnotism's rise and fall from popularity always begins with Franz Anton Mesmer, who believed he had discovered a physical force – 'animal magnetism' – inhabiting the body. If this force were in any way impeded it would lead to diseases which could only be cured if its flow could be revived, initially by magnets applied to the skin, later by the movement of Mesmer's own hands with which his name is still linked. From this point on, the version you are most likely to have heard will depend upon allied interests. Mine links the fall in Mesmer's reputation to accusations of charlatanry from the medical profession, the disappearance of his ideas from the late eighteenth-century scene and their mysterious rise again a century later as hypnotism – a term referring to a state of mind bordering on sleep, which allowed implanted ideas to be 'acted out' within the body, and to the means of achieving it using techniques of suggestion. There was no finer exponent of the latter than Jean Martin Charcot who, at the Paris Salpêtrière hospital, bolstered his reputation with his dramatic demonstrations on hysterical patients. His supporter Pierre Janet was sufficiently impressed to continue the practice but eventually dropped it; so did the young Freud. Interest in hypnotism waned again in the early part of the twentieth century, only to make a half-hearted appearance in the latter half as hypnotherapy, one of a handful of practitioner skills that a clinician might call upon if s(he) was dealing with patients seemingly immune to more conventional forms of treatment. In the public mind, however, it remained a fascinating phenomenon caught up in an aura of mysticism.

Alan Gauld's book reveals that this sketchy narrative does not do justice to the myriad developments in psychiatry and psychology

which Mesmer's ideas unintentionally spawned. As one might expect, the events are complex and clearly warrant the corrective account which Dr Gauld provides. He steers a clear path through the large, diverse literature and avoids a partisan stance on the findings to present a lively and informative account of this baffling phenomenon.

From the beginning the Royal Commissioners from the Paris Faculty of Medicine and the Royal Academy of Sciences were embroiled in pamphlet wars with supporters of Mesmer. They concluded, on the basis of limited control studies (e.g. blindfolding subjects, and falsely informing them they were being 'magnetized') that its supposed effects – the reporting of warm and/or pain sensations, and cures – were due to the powers of the imagination, and not the manual movement of inner forces *per se*. But this explanation, still circulating today, is inadequate for two reasons. It fails to allow for the differential effect of imagination upon sensation, and to a physical influence upon the cures by the 'magnetic passing' of the hands. If cures were due to nothing other than imagination, this raises the question of the precise link – a question which was not pursued by the Commission, in spite of the enormous number of positive reports emanating from Mesmer's grateful clients.

The initial forays and the concomitant controversy set the scene for what was to follow over the next century across Europe as the mesmerism movement was fervently proclaimed by its supporters and reviled by its detractors, usually upholders of established medical practice. Its hiatus, in Britain at least, seemed to have been achieved in the mid-nineteenth century with the reporting of mesmeric analgesia, which signalled the possibility of a unification of the warring sides. Gauld ventures the hypothesis that its subsequent demise may have been due to the rise in popularity of spirit mediums on the one hand, and to chemical anaesthetics on the other.

It was the Scottish surgeon James Braid who revised the terminology to convey the idea of hypnotism as nervous sleep, the origin of which lay in an altered brain state. His ideas were taken up by others but it was the charismatic figure of Charcot who drew parallels between the stages undergone by certain premonitory types – hys-

terics – and *grand hypnotisme* and made the case for the latter as a special clinical state, based upon only a dozen or so well-practised subjects. He was opposed in this by Hippolyte Bernheim, whose school at the Medical Faculty at Nancy was devoted to the treatment of both functional and organic ailments by hypnotherapy. He thought that no special state existed and that all people to varying degrees could be hypnotized by implanting any idea in the mind.

But how so? The recent debate would appear to be between those who see hypnotism as a dissociation of conscious intentional activity, and those who see it as an example of everyday role-guided behaviour. Gauld himself is critical of both positions and concludes his exhaustive review by arguing that while there is independent corroborative evidence for many of the states associated with hypnotism, such as somnambulism, suggestibility and state-dependent memory, it itself may be no more than an artefact with no basis in reality. Rather, the knowledge of these states circulating with widely held cultural beliefs has ‘helped to give hypnotism as a concept and a set of practices its durability and also its powerful and suggestibility enhancing influence on the minds of those about to be hypnotized’. How this is made possible we have yet to establish, which promises to keep the debate going for some time to come.

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HANS WERNER SCHÜTT, *Eilhard Mitscherlich: Baumeister am Fundament der Chemie*. Abhandlungen und Berichte, Neue Folge 8. Munich: R. Oldenbourg Verlag/Deutsches Museum, 1992. Pp. 192. ISBN 3-486-26273-4. No price given.

While not exaggerating the importance of Eilhard Mitscherlich (1794–1863) in this agreeably written biography, Professor Schütt is nevertheless prepared to see him as the architect of the foundations of contemporary chemistry. In elucidating the phenomenon of isomorphism in 1819, Mitscherlich stimulated the marriage between physical theories of crystallography and chemical composition, besides providing a helping hand in the calculation of atomic weights; in preparing

benzene from benzoic acid in 1834 he eased the way towards the deeper study of aromatic chemistry; through his identification of a new form of tartaric acid he paved the way for Pasteur’s work and, hence, stereochemistry; while in his postulation of the contact theory of etherification he provided the stimulus not only for the concept of catalysis, but also for a resolution of the opposed biological and chemical theories of fermentation. In each of these chemical steps – all, arguably, foundation stones of inorganic, organic and physical chemistry – Mitscherlich played an innovatory role; disappointingly, however, with the possible exception of isomorphism, he failed to follow them through as research programmes.

It is the principal merit of Schütt’s book, which is based upon a study of Mitscherlich’s papers in Berlin and Munich, that he examines Mitscherlich’s ‘failure of promise’. A late-comer to chemistry, historians are familiar with the fact that he was trained initially in oriental languages and that his first doctorate (at Giessen) was in Persian. Indeed, it was his longing to visit Persia and failure to obtain a Consulate position there that drove him to study medicine (and hence chemistry) at Göttingen and Berlin, with a view to working his way East as a ship’s doctor. Schütt is interesting on the widespread German interest in oriental studies in the Vormärzt period; for example, Mitscherlich’s polymathic Berlin botany teacher, Heinrich Link, also read Arabic and Sanskrit. (Schütt misses the delicious irony that Mitscherlich’s greatest cross in life, Justus Liebig, was the recipient of homoerotic *Ghasels* (Persian love poems) by Platen during the early 1820s.) Sad to relate, Mitscherlich never got to Xanadu, though there seems no political or financial reason why he could not have done so in the 1820s. This lack of fulfilment was also reflected in his chemistry.

Schütt detects echoes of Mitscherlich’s philological training in his scientific work even though he abandoned oriental studies completely once he accepted Berzelius’s invitation to study with him in Stockholm in 1819. It was Berzelius’s powerful patronage that found him the Chair of Chemistry at Berlin, where he remained until his death in 1863. Apart from a fine textbook – the first German text to be illustrated by woodcuts