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► **To cite this version:**

Sander L. Gilman. Electrotherapy and mental illness: then and now. *History of Psychiatry*, 2008, 19 (3), pp.339-357. 10.1177/0957154X07082566 . hal-00570908

**HAL Id: hal-00570908**

**<https://hal.science/hal-00570908>**

Submitted on 1 Mar 2011

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## Electrotherapy and mental illness: then and now

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*Today electrotherapy has reappeared as a therapy of choice for the treatment of depression and other forms of mental illness. It had de facto vanished from allopathic medicine from the 1920s to the end of the century. The debates about electrotherapy mirror the question of whether mental illness was somatic and to be treated by somatic means or psychological to be treated with psychotherapy. Sigmund Freud's move from an advocate to an opponent of electrotherapy is exemplary for a shift in attitude and the decline of electrotherapy. With the re-somaticization of mental illness over the past decades has come the reappearance of somatic therapies such as electrotherapy.*

**Keywords:** *anti-Semitism; electrotherapy; globus hystericus; mental illness; Sigmund Freud; vagal nerve stimulation; voice*

The twenty-first century (re-)appearance of electrotherapy for the treatment of mental illness recalls how very important such therapies were for the treatment of analogous problems for over 150 years (Bryan, 1966; Henke, 1970; Morus, 1992, 1998, 1999). Electrotherapy flourished in allopathic medicine from the end of the eighteenth century to the post-World War I period, when it seemingly vanished (or entered the world of alternative or complementary medical practice). Between the end of WWI and the mid-1960s, mention of electrical stimulation for treatment of mental illness all but disappeared as the focus on defining mental illness moved from a purely somatic understanding of mental illness to one that mixed somatic and psychological aetiologies. Electrotherapy machines became the stuff of medical museums. By the 1990s mental illness had again become 'brain disease'. Electrotherapy reappeared as a therapy.

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The development of an analogous treatment, 'Electro-Convulsive Therapy', by Ugo Cerletti and Lucio Bini in 1937, replacing insulin and camphor therapy for schizophrenia, appeared at a point when electrotherapy had fallen out of fashion. ECT too has recently made a public comeback for the treatment of profound depression in our age of re-somaticization.

A hundred years ago the 'age of electricity' saw the application of this 'new' medium to medical therapy, as a late nineteenth-century advocate noted (Hedley, 1900: iii). As with virtually every technological innovation since the discovery of fire and the invention of the wheel, electricity was immediately applied to the treatment of pathologies, including those of the psyche. It was the case with the Greeks' invention of smelting metal – which became Aristotle's model for the heart and lungs and also for therapeutic interventions. (The Greeks used a form of electrotherapy by generating static electricity through rubbing fur on amber.) In the early twentieth century a similar leap was made with the discovery of vitamins and the assumption that virtually all illnesses could be 'cured' with these newly discovered substances. Yet at each stage, different meanings were attached to the function of 'electricity' and certainly to the question of what it meant to provide succour to that most-difficult-to-imagine aspect of the human being, the psyche. This tale provides a double insight into how electrotherapy for mental illness was constituted in the light of technological innovation, as well as the implications of the historical record for the present (if nascent) fascination with vagal nerve stimulation by pacemaker, cranial electrotherapy stimulation and other somatic electrotherapies.

### **The age of electricity**

By the end of the nineteenth century, electrotherapy in its many forms was the treatment of choice for a wide range of mental illnesses such as hysteria. Electrotherapy had been espoused for the treatment of 'nervous' or 'mental disorders' from the eighteenth century by respected physicians such as Richard Lovett, as well as by his friend, the physician Erasmus Darwin, who treated epilepsy (which for him was related to hysteria) with a 'Galvanic pillar' (Darwin, 2007: 237, 566; Lovett, 1756: 109). It became a commonplace treatment in the nineteenth century with the expansion of the work of the electrophysiologists and the assumption that this knowledge reflected therapeutic as well as anatomical 'truths'. Even neurologists such as S. Weir Mitchell, whose fame in his time relied on the popularity of his 'Rest Cure', employed electrotherapy as one of his favoured treatments (Mitchell, 1898: 96–106).

The treatment of mental illness used a set of primary symptoms to define the appropriate parameters for treatment. There was an ancient association between the loss or impediment of speech (*globus hystericus*) and hysteria, which reappeared in the nineteenth century as a major diagnostic category (Gilman, King, Porter, Rousseau and Showalter, 1993). In that period, hysteria was defined in conflicting ways; some theories place hysteria in the realm of

neurological disorders (as the result of physical trauma) and some see it as a psychological disorder. The discussions of hysteria and the voice assume a physiological basis for hysteria. According to one of the standard textbooks of the time ‘globus [is] one of the most common symptoms of hysteria’ (Oppenheim, 1904: 716). There was, however, a gendered quality to these diagnoses, which was inherent in the general nineteenth-century use of hysteria as a diagnostic category. According to Hermann Oppenheim (1904: 731): ‘In Germany, and also in the United States, the milder types [of hysteria] are the most frequent; women who complain of great unrest, irritability, *globus*, fear, headache ...’. As late as 1908, Wilfred Harris (1908: 212–14) at St Mary’s Hospital in London, noted that:

hysterical aphonia is most commonly met with in young women, and is apt to recur at various times, like other hysterical symptoms. If of recent onset, it can often be cured at once by electrical treatment, though the faradic current will be much better for this purpose than the galvanic.

He applied ‘laryngeal electrode intralaryngeally’ with short three to four second bursts of electricity. ‘In a great many cases a rapid cure will be effected by this faradic treatment, the patient being encouraged to speak after the current has been turned on and off three or four times.’ Women seemed to be the primary patients but, as we shall see, other liminal social categories, understood as biological, were seen to be equally at risk.

Hysteria was, in the view of most of the nineteenth-century electrotherapists, a disease rooted in invisible lesions of the nervous system and could be cured by their stimulation. These electrotherapists may well have self-identified as belonging to different medical specialities (Oppenheim as a neurologist and Harris as a laryngologist), yet they saw globus hystericus as the symptom of hysteria, which their specialty using electrotherapy could cure. This competition for a growing patient population relied on the status of electrotherapy in the light of the scientific claims of electrophysiology during the nineteenth century. As the body was ‘mapped’ electrically, the use of a cutting-edge technology for treatment of what was seen as one of the dominant ills of the day seemed obvious.

As early as 1867, the electrotherapist George Miller Beard had defined ‘neurasthenia’ as ‘The American Disease’ (Beard, 1867); this is the disease of urban, stressful life; the suffering of those unable to keep up with the speed of modernity, whose nervous system collapses under the strain. For Beard, as for many neurologists of the time, disruptions and illness of the voice, especially the globus hystericus or hysterical aphonia, served as a primary diagnostic symptom (Tobold, 1868: 174). Beard, like many of his contemporaries, saw nervous fluid and electricity as interchangeable and associated with a principle of vitality. Thus, pathologies were disequilibrium of nerve force, and electricity was seen as restorative. Which group of Americans suffer from this? None other than ‘professional cultivators of the voice’ (Beard, 1867: 28). Furthermore:

Any one who has treated neurasthenia knows that physical exercise is good up to a certain degree, but when you undertake to go beyond that point all exercise is injurious and if persisted there will be a collapse. Exactly the same conditions prevail here and are the cause of so many voices breaking down under training. (p. 29)

A prime symptom of physical 'hysterical neurasthenia' is to be found in the voice as the globus hystericus (p. 56). For this too, he advocates the treatment of physical hysteria, an 'exaggeration of neurasthenia', with electrotherapy (p. 312).

Beard's imaginary construction of the body was typical of the claims about efficacy based on theories about electricity and anatomy. In the work of James Corning in the late nineteenth century, such electrotherapeutic treatments were suggested as part of the general fad of electrotherapy (Corning, 1883*a*). Corning's work rested on the extension of a metaphor into a therapeutic approach. This was based on John Hughling Jackson's view that the seizure was caused by the 'discharge of nervous energy from the cortex' (Corning, 1883*a*: 245). Corning's idea was that one must treat the 'venous hyperaemia' that 'augmented the irritability of the convulsive centre ...' and caused seizures (p. 244). This electric metaphor was sufficient to provide a 'scientific' basis for treatment through 'general faradization and galvanism' (p. 248). He believed that the compression of the carotid artery would suppress the seizures. His work paralleled a wide-range of the application of electricity to the treatment of mental and nervous ailments, such as the application of electrical therapy on the 'cervical sympathetic ganglia and the cervical vertebrae' for the treatment of 'melancholia attonia' (Corning, 1883*b*). Corning's contemporaries were less impressed, and electrotherapy for epilepsy never caught on, but the treatment of depression proved to be a rich source of potential patients.

## Doubts

However, there were always dissenting opinions. William Beven (1842: 176), at the beginning of the electrophysiological era, called such therapies 'another instance of those chimerical fancies of the day, which are perpetually disgracing our profession, and bringing it into contempt with the public; that, like mesmerism, it will meet with a similar fate – to be merely had in memory, and as a tale that were told.' The fact is that electrotherapy, with all its far-reaching therapeutic claims, did not vanish but was institutionalized. Indeed even the use of the globus hystericus as a primary symptom was drawn into question. Charles Darwin, in the third of his great studies, *The Expression of Emotions in Man and Animals* (1872) avoided any psychological reading of the globus hystericus. He saw this as a natural result of 'sorrow' when:

the grief of a person in this state occasionally recurs and increases into a paroxysm, spasms affect the respiratory muscles, and he feels as if something,

the so-called *globus hystericus*, was rising in this throat. These spasmodic movements are clearly allied to the sobbing of children, and are remnants of those severer spasms which occur when a person is said to choke from excessive grief. (Darwin, 1872: 179)

Darwin in no way understood this as a pathological symptom but as a 'normal' response to the memory of grief. No therapy was necessary. A similar tack was taken by the American psychologist (and creator of the modern concept of 'adolescence'), G. Stanley Hall, who reduced hysteria (and the *globus hystericus*) to a 'normal' response to the onset of menstruation in adolescent females (Hall, 1904: 495).

Yet during the nineteenth century, the great debates about electrotherapy had to do with procedures rather than efficacy. It was assumed that the newest treatment, because of its analogy to the newest science, electrophysiology, worked. The only questions to be raised were the intensity of the discharge and placement of the electrodes. By the close of the century, however, doubts were being raised about efficacy. The American psychiatrist Morton Prince advocated the use of electrotherapy for hysteria but also noted, 'as is likewise the case when a cure is effected by other means, there is a tendency for it to return' (Prince, 1902: D-124). For him there was a differentiation between hysterical aphonia and other diseases of the voice, as the hysteric could not phonate but could cough or even sing. The tension was between hysteria as a somatic disease treatable by mechanical means and as a psychological disease, which needed psychotherapy. Yet it was never completely successful as a therapy.

At the beginning of the twentieth century the Scots physician Samuel Sloan, head of the Electro-Therapeutical Section of the [British] Royal Society of Medicine (which existed from 1907 to 1931) could look back at the question of the success of the method. He was, of course, an advocate of the method, presenting successful case studies of psychic neurasthenia caused by an inflammation of the vulva, of thought disorder and insomnia treated by faradization of the brain. But even the claim of such remarkable successes was qualified by Sloan who concluded that 'the best results will be obtained by utilizing to the full all the resources of the healing art – electrical, dietetic, physical, psychic; and he is the most successful physician who has his quiver full of such weapons and who, in cases of difficulty, is fertile in resource' (Sloan, 1911: 17). The 'psychic' was clearly a reference to the psychological theories of voice loss and illness now growing in importance on the continent.

### **Alternative models**

Perhaps the most important figure to recognize the limitations as well as the rationale for success of the electrotherapy for the treatment of mental illness was the Viennese neurologist Sigmund Freud. For the young Freud, newly returned from study in Paris in 1886 with the neurologist Jean Martin Charcot, hysteria was the 'contrary' of neurasthenia; it too was a modern disease, but

one which had its roots in a trauma of the central nervous system resulting in 'invisible' lesions. Its treatment needed to address the somatic nature of the disease. Thus, in addition to hypnosis (understood as a somatic therapy), Charcot indeed used electrotherapy, including static electrical sparks, in the treatment of his hysterics.

One of the central symptoms that defined this new way of seeing hysteria as a result of neurological trauma was the 'well-known ... *globus hystericus*, a feeling referable to spasms of the pharynx, as though a lump were rising up from the epigastrium to the throat' (Freud, *SE*, 1: 42). Yet Freud was quite aware, given his tutelage in Paris, that hysteria was in no way a disease of women only, as 'hysteria in males gives the appearance of a very severe illness' (*SE*, 1: 52). Yet he warned that hysteria was over-diagnosed and that somatic illness could be the cause of symptoms that mimic hysteria: 'a stomach with a catarrhal affection can give rise to hysterical vomiting, *globus hystericus* and anaesthesia or hyperaesthesia of the skin of the epigastrium.' For all these symptoms electrotherapy was certainly one of the treatments of choice. Thus, after Freud's colleague Joseph Breuer 'successfully concluded' the first talking cure in 1882, his patient Bertha Pappenheim was admitted to sanatoria in Austria and Switzerland for a long series of stays until 1887, where she was certainly treated with that most modern of interventions, electrotherapy (Skues, 2006).

Freud abandoned electrotherapy (as well as hydrotherapy, massage, the 'rest cure' and hypnosis) to treat his 'neurotics' to explore the 'cathartic method' (the talking cure) after 1895, seeing electrotherapy as having no value whatsoever. He had used electrotherapy extensively, even having purchased an expensive machine through a loan from his wealthy friend Ernst Fleischl von Marxow, whose morphine addiction he later unsuccessfully treated with cocaine (not electrotherapy) (Anzieu, 1986: 39). His treatment of his patients in 1887, whom he saw suffering from lesions of the nerves, incorporated electrotherapy, as in the case of a 'post-diphtheritic paralysis of the legs'. Another case in 1888 of 'cerebral neurasthenia' treated with 'galvanization' showed 'steady improvement'. By 1892, being 'satisfied with symptomatic methods' as 'the patient does not demand anything other than this' did not seem sufficient to Freud (Masson, 1985: 16, 18, 21). When writing about 'acute hysteria' and its treatment in 1888, in a handbook directed at general practitioners, Freud advocated treatment by the 'use of an open-air life, hydrotherapy, electricity (preferably by high-tension treatment), and improving the blood by arsenic and iron medication' in addition to the newly developed 'talking cure' (*SE*, 1: 55). But he also noted that there were remarkable shifts in symptoms in hysterics through the application of certain therapies, which indicated that the symptoms were non-organic:

This shifting of the symptoms is brought about either spontaneously (for instance, after convulsive attacks, which often change the distribution of paralysis and anaesthesia or suspend them) or owing to artificial influence by

what are called aesthesiogenic methods: such as electricity, the application of metals, the employment of cutaneous irritants, magnets, etc. (*SE*, 1: 47)

This combination of shifting symptoms and specific therapies gave Freud pause for thought.

As Freud recalled a decade later in *The History of the Psychoanalytic Movement* (1914):

I had embarked upon physical therapy, and felt absolutely helpless after the disappointing results from my study of Erb's *Elektrotherapie* [1882], which put forward a number of indications and recommendations. If I did not at the time arrive on my own account at the conclusion which Möbius established later, that the successes of electrical treatment in nervous patients are the results of suggestion, there is no doubt that only the total absence of these promised successes was to blame. (*SE*, 14: 9)

It turned out to hold no more 'reality than some "Egyptian" dreambook, such as sold in cheap bookshops' (Killen, 2006: 52). Freud was among a growing number of therapists in the 1890s who came to judge electrotherapy as unsuccessful since it was deemed to be only effective through suggestion, not as was claimed, through a direct action on the nervous system. Yet their powerful associations with the newest technologies of the dynamo and mass electrification made electrotherapy remain seductive. Among these was, as Freud noted, the famed neurologist Paul Möbius, a student of the electrotherapist Wilhelm Erb, who in 1889 wondered if the success of electrotherapeutics was due to 'suggestion' initiated by the elaborate electrical apparatus, which features so prominently in all the presentations of electrotherapy of the age (Roelke, 2001: 182; Schiller, 1982).

It was the neurologists of the time who saw the psychological dimension of electrotherapy most clearly. By the 1930s even the electrotherapists who claimed a somatic effect argued that 'sparks from a static machine are effective [in the treatment of hysteria] and have an additional psychic effect' (Cumberbatch, 1939: 426). The psychiatrists, on the other hand, continued to use electrotherapy through World War I. One of the great scandals was the accusation that Freud's colleague at the University of Vienna, the psychiatrist Julius Wagner-Jauregg – director of the First Psychiatric Clinic in Vienna, and winner of the Nobel Prize (1927) for the malaria therapy of general paralysis of the insane (tertiary syphilis) – had used 'electrotherapy' on 'war neurotics' (shell shock) which had led to suicides and deaths. Freud testified for him on 14 and 16 October 1920, and he was eventually acquitted of all charges (Eissler, 1979: 55). Freud wrote to Sándor Ferenczi:

Next Thursday I will have the pleasure all morning of functioning as an expert witness in the trial of the Commission for Military Violations of Duty against Wagner-Jauregg and others. It has to do with the war neuroses. I will naturally treat him with the most distinct benevolence. It also isn't his fault. (Brabant-Gerö, Falzeder and Giampieri-Deutsch, 2000: 3: 34–6)

It was not, of course. It was electrotherapy's fault.

In 1895 in *The Studies in Hysteria*, Freud had reported that Frau Emmy von N.'s (actually Fanny Moser) 'spastic inhibition of speech, her peculiar stammer' (*SE*, 2: 93) was the result of 'convulsive inhibition of the organs of speech' due to the underlying motivation of her hysteria. They were 'linked up with so many traumas, had so much reason for being reproduced in memory, that they perpetually interrupted the patient's speech for no particular cause, in the manner of a meaningless *tic*' (*SE*, 2: 93). The stammering was 'a simple conversion of psychical excitation into motor activity' (*SE*, 2: 95). Freud treated Frau Emmy von N. as the first of his patients with the 'talking cure'. Thereafter electrotherapy was seen as less and less effective. Freud dismissed 'faradizations of the sensitive muscles' and even the use of 'high tension electric current' to cure another of his hysterics, Fräulein Elisabeth von R.'s inability to walk, as a 'pretence treatment' (*SE*, 2: 138). Freud understood that the more powerful the shocks he administered to her the more she 'seemed to take quite a liking to the painful shocks produced by the high tension apparatus, and the stronger these were the more they seemed to push her own pains into the background' (*SE*, 2: 138). Freud understood the psychological rather than the neurological impact of the treatment. Freud turned again to the talking cure to intervene, as the electrotherapy seemed rather to reward the patient's hysteria. In this case study Freud again turned to the classic hysterical symptoms of the *globus hystericus*, in the case of two professional singers. One 23-year-old:

had a good voice, but she complained that in certain parts of its compass it was not under her control. She had a feeling of choking and constriction in her throat so that her voice sounded tight ... Although this imperfection affected only her middle register, it could not be attributed to a defect in the organ itself.

The other was:

a case of a singer under my observation in which a contracture of the masseters made it impossible to practise her art ... She was singing at a rehearsal in Rome at a time when she was in a state of great emotional excitement, and suddenly had a feeling that she could not close her open mouth and fell to the floor in a faint. (*SE*, 2: 169–70)

In both cases, with reference to the case of Frau Emmy, these were shown to have been psychological responses to traumatic events of a sexual nature. What was so remarkable was Freud's dealing with such professional users of the voice, who were clearly for him exemplary cases for his new model of intervention as they were inappropriate for electrotherapy. He wooed these patients away from the electrotherapists who would have intervened into their vocal problems through faradic treatments. Yet Freud's was a dissenting voice in the treatment of neurosis and attendant vocal problems. Thus the debate shifted from physiological or somatoform to psychological or psychogenic

categories, but it still continued (Lehtinen and Puhakka, 1976; Mace, Ron and Deahl, 1989; Puhakka and Kirveskari, 1988).

By the oft-discussed *Fragments of an Analysis of a Case of Hysteria* (1901, published 1905), Freud had abandoned electrotherapy in the treatment of his hysterical patients. The 18-year-old 'Dora' (Ida Bauer) had been brought to Freud by her father Philip Bauer suffering from aphonia, depression and fits of coughing, and she had threatened suicide. Diagnosed as early as 1894, as a 12-year-old, Dora would have been subjected to intensive sessions of electrotherapy by her physicians (Decker, 1992: 10–14). Her larynx would have appeared normal to them. Yet her adductor muscles were partially paralysed, causing the vocal cords to remain separated. However, when she coughed the adductors were able to come together. This would have been seen through the use of the laryngoscope. To treat her the physicians would have applied current directly to the larynx, but – as was clear when Freud examined her – without any long-term success. Electrotherapy simply did not work, as it should have done. Dora's physicians were expecting a lesion; Freud came to understand the psychogenetic nature of her illness. (There are a number of 'problems' with Freud's interpretation of the case of Dora, but his choice of therapy is not among them; Bernheimer and Kahane, 1985.) Freud saw in this case of failed electrotherapy a return to early childhood patterns, not a lesion of the nervous system. 'Many of my women patients who suffer from disturbances of eating, *globus hystericus*, constriction of the throat and vomiting, have indulged energetically in sucking during their childhood' (*SE*, 7: 182). This was his new reading of the loss of voice, a core symptom in the case of Dora. Freud's complicated account of this case stressed the sexual fantasy that lies at its core. But his treatment was the talking cure. Electrotherapy was never considered.

## Race

Yet there was a variable quite missing from Freud's public rejection of electrotherapy. It was the question of the central 'biological' category of nineteenth-century medicine: race (Stepan, 1982). Freud's early patients were almost exclusively Jewish women, and they were deemed to be extraordinarily predisposed to hysteria because they were Jews as well as being women. One might add that many of the Viennese neurologists were also Jews, as was the case with many of the Central European electrotherapists, such as Robert Remak (Killen, 2006: 63). They all needed to wrestle with the claim that Jews were at greater risk of mental illness while claiming their new role as therapists for mental illness. Access to medical specialties went in reverse of their social status: thus, few Jews in the 1880s were academic surgeons, but they were found in fields ranging from dermatology to laryngology to neurology, where electrotherapy was a primary mode of treatment. Electrotherapy seemed to cut across all fields and provide a model for therapy, which was, on its surface, free of claims about racial predisposition.

Freud's most startling exposure to such views may well have come during his stay in Paris during 1885 and 1886 when he studied with Jean Martin Charcot. Charcot represented the cutting edge of contemporary somatic medicine dealing with hysteria. In Charcot's *Tuesday Lessons*, such as the one for 27 October 1888, there was the stated presumption that 'nervous illnesses of all types are innumerable more frequent among Jews than among other groups' (Charcot, 1889: 2: 11–12). Charcot attributed this fact to inbreeding (Lagneau, 1891). Charcot (1889: 1: 131) saw 'the Jews as being the best source of material for nervous illness ...'. (Charcot had a number of Russian male Jews suffering from hysteria and neurasthenia as his patients; their case notes are among his unpublished papers in Paris.) Freud, who translated the first volume of these lectures into German in 1892 (and certainly knew both volumes intimately), was also lectured by Charcot about the predisposition of Jews for specific forms of illness, such as diabetes, where 'the exploration is easy' because of the intermarriage of the Jews (Gelfand, 1989: 574). In his letter to Freud, Charcot used the vulgar '*juif*' rather than the more polite '*Israélite*' or more scientific '*sémite*' (Gelfand, 1989: 304). In an off-the-record remark 'a French physician', most probably Charcot, commented that: 'In my practice in Paris, ... I have the occasion to notice that, with the Jew, the emotions seem to be more vivid, the sensibility more intense, the nervous reactions more rapid and profound.' And this leads to the 'vital sap ris[ing] from his limbs, or his trunk, to his head [and]... his overstrained nervous system is often apt, in the end, to become disordered and to collapse entirely' (Leroy-Beaulieu, 1895: 168). This view was certainly present within mainstream German medicine at the time. The anthropologist-physician Georg Buschan, whose first position had been as an asylum physician in Leubus in 1886, stressed, in an address to the Organization of German Psychiatrists in Dresden on September 21, 1894, the 'extraordinary incidence' of hysteria among European Jews as a sign of their racial degeneration (cited in Morpurgo, 1903: 66–7).

When Freud returned to Vienna from Paris and began teaching in the Medical Faculty, he found such views as the predisposition of Jews for specific forms of mental illness stated as commonplaces. The standard handbooks of the time repeated this view in various contexts, including those that associated the hidden taint of the Jews' potential mental illness with the visible signs of degeneracy. The view was not limited to the Jews of fin-de-siècle Europe. Georges Wulfing-Luer (1907) published a detailed study of the Jews' predisposition to nervous diseases in which he traced this predisposition back to Biblical times, attempting to counter the argument of the situational causation of the nervousness of the Jews. Such views were espoused by noteworthy opponents to political anti-Semitism, such as the French historian Anatole Leroy-Beaulieu. He, too, agreed that 'the Jew is particularly liable to the disease of our age, neurosis'. He saw the reason that 'the Jew is the most nervous of men, perhaps, because he is the most "cerebral", because he has lived most by his brain.' He is 'the most nervous and, in so far, the most modern of men'

(Leroy-Beaulieu, 1895: 168–9). The treatment of choice for Jewish nervousness was electrotherapy.

Certainly the major figure to deal with the mental illness of the Eastern Jews was the Jewish psychiatrist Hermann Oppenheim, the widely cited author of a standard psychiatric textbook of the period (Oppenheim, 1894–1913). While all ‘races and nations’ manifest hysteria, ‘Jews’ are ‘especially liable for hysteria’ (Oppenheim, 1904: 703). His essay on the psychopathology of the Russian Jews is without a doubt the most widely cited and authoritative work in the field. Published in a *Festschrift* for August Forel, he began with the complaint that ‘from year to year the growing hoards of patients from Russia come to us for advice and cure ...’ (Oppenheim, 1908). The ‘us’ is the Western physician. Oppenheim stated quite directly that it was ‘well-known that Jews have a predisposition for neurosis and psychosis’. He made an unstated distinction between the collectivity of the Eastern Jews, whose social milieu triggered the innate predisposition for mental illness and the individual Western Jew, such as himself, who may bear the taint but had not been exposed to the circumstances which trigger the illnesses.

What is striking in Oppenheim’s account is the role that the voice played as a sign of the sensibility of the patient or nosology of the disease. He noted that even:

with the simplest test for sensitivity with needle pricks the patient cries out: ‘Gewalt, Gewalt!’ Certainly cowardliness, the fear of pain may play a role, but more evidently this cry seems to me a statement of the horrid path of suffering of this people i.e. this race. (Oppenheim, 1908: 4)

In another case study he described the visit of a Russian-Jewish singer who had imagined a change in the quality of her voice upon the death of her husband. She appeared to be a hysteric according to Oppenheim, yet the only sign of her putative aphonia was a slight nasality in her voice. This he noted ‘was in intimate relationship to her mental state’ (Oppenheim, 1908: 6). The image of the female seemed to subsume the image of the Jew and yet, for Oppenheim, the voice of the Eastern Jew permeated even the veneer of high culture. The altered voice of the Jew was a sign of the Jew’s pathological relationship to the discourse of high culture. ‘The hidden voice of the Jew’ revealed the Jew within, even though all external signs had changed. It was the voice, more than any other quality, the distinctive lilt that could never be truly masked, that was the most evident sign of the modern Jew. It was the result of the very nature of the Jew’s body, according to a medical authority of the day, that Jews spoke differently: because the ‘muscles, which are used for speaking and laughing, are used inherently differently from those of Christians, and this use can be traced ... to the great difference in their nose and chin’ (Blechmann, 1882: 11). In self-consciously attempting to repress it, the globus hystericus became the symptom of choice. Oppenheim’s hysterical opera singer reverted to the primeval sounds of her *Mauscheln*, speaking with a Jewish intonation. In Freud’s

early case studies the sign of damaged discourse became a generalized and medicalized symptom.

The question of a Jewish predisposition to hysteria marked by a new version of the ‘hidden language of the Jews,’ the *globus hystericus*, led Freud to abandon the notion of hysteria as an inherited disease that had a specific racial component. All this took place as he was also abandoning electrotherapy as ineffectual because of the psychological make up of his patients. Leopold Löwenfeld, one of Freud’s most assiduous supporters, confronted the question of the racial predisposition of the Jews in his textbook of 1894. In his discussion of the aetiology of neurasthenia and hysteria he examined the role that ‘race and climate’ might play in the origin of these diseases:

Concerning the claimed predisposition of the Semitic race, one can only state the fact that among the Israelites today there is an unusually large number of neurasthenics and hysterics. Whether this is the result of a specific predisposition of the race seems very questionable. Historically, there is no trace of such as predisposition to be shown. The epidemics of mass hysteria observed in earlier centuries never affected members of the Semitic race. I believe it more likely that the great predisposition of the Israelites does not rest in racial qualities, but in their present quality of life. Among these would come into consideration – in East Europe, the physical poverty as well as the extraordinary moral pressure, the practice of early marriage, and the great number of children – in the West, the great number of Israelites who undertake intellectual activities. (Löwenfeld, 1894: 44–5)

Freud read Löwenfeld’s textbook very carefully. The opening pages are full of debates about the inheritability of hysteria and its relationship to trauma. Thus, Löwenfeld claimed that ‘inheritance plays a major role in the origins of neurasthenia and hysteria through the existence of an abnormal constitution of the nervous system.’ Freud retorted: ‘From where?’ in the margin. Tucked away in a footnote, Löwenfeld (1894: 16) quoted a source that claimed that to have seen a large number of cases of hysteria ‘without a trace of hereditary neurosis’. Freud chuckled: ‘Bravo! Certainly acquired.’ These comments reflected Freud’s preoccupation with the universal question of whether all human beings could be divided into the healthy and the degenerate, the mentally sound and the hysteric, those who were tainted by race and those who were not. Löwenfeld’s rejection of the predisposition for hysteria for *all* Jews meant it was possible to focus on the universal rather than the racialist question. Yet Löwenfeld’s distinction between Eastern Jews, with their mix of social and sexual causes for their mental states, and Western Jews, with their (highly sought) intellectual status, shows that even there a dichotomy between the religious and the secular Jew is sought. Freud seems never to have reached this section of Löwenfeld’s book; his eye remained fixed on the universal questions about the meaning and cause of mental illness and did not seem to enter into the debate about the Jews and madness. Therapies that attempted

to alter the body rather than the psyche could not work: they engaged only a fantasy of the body, one contaminated by the biological thinking of anti-Semites. For Freud the ineffectual nature of electrotherapy demanded new universals of the psyche, for it could never be through an intervention in the body that the psyche could be changed. Only the new psychotherapy could cure the symptoms of the body including globus.

By 1897 Freud, having abandoned his view that all his hysterics suffered from sexual trauma, continued to treat voice and vocal symptoms with psychoanalytic interventions. By 1905 he was able to extrapolate this symptom not as a sign of Jewish racial degeneration but as a universal 'error' of early childhood experience. He refuted, in the case of Dora, the very notion of the inheritability of hysteria, seeing it very much as an acquired disease, as the sufferers were largely the children of syphilitics (even though he believed there may be some 'hereditary predisposition' for the illness) (*SE*, 7: 20, n.1). Yet Freud's dominant view as expressed in his essay on *Infant Sexuality* (1905) came to be that the globus hystericus was the repression of the earliest stage sexual development, the child's oral gratification, the desire for which became pathological in adulthood.

### **Globus and hysteria after Freud**

By the 1950s psychological explanations for globus hystericus had become commonplace (Aronson, 1969). Judd Marmor (1953) stated: 'the question, therefore, is not whether oral mechanisms are prominent in hysteria. That is taken for granted. The problem, rather, is whether these [oral] mechanisms may not play a more *determining* role in the dynamics of hysteria than has been generally assumed' (original italics). By that point there was no question that 'talk therapy' was the only approach to globus.

By 1969 electrotherapy had become an adjunct of physiotherapy, and the standard handbook of the day, while speaking of diathermy, electroshock, ultrasonic and ultraviolet therapies, avoided any discussion of the treatment of the larynx or the voice, never mind any forms of mental illness (Scott, 1969). The 'tingle' effect, the key to the psychological function of electrotherapy, had ceased to be associated with medical treatment, as electricity became a commonplace of Western cultural experience:

The effect of an electrical current on the body depends on its intensity. At 25 milliamps, the current, if it lasts for about 20 seconds, can stop the heart beating. But below 10 milliamps, whether direct current from a battery or an alternating current at ordinary mains frequencies (50 to 60 hertz), the current can create a rather pleasing tingle. (Fishlock, 1994)

The 'tingle' effect is a physical response which then has psychosomatic implications as a placebo.

When these forms of electrotherapy were proved ineffective by the beginning of the twentieth century, more radical approaches, such as Wagner-Jauregg's 'malaria therapy' for general paralysis of the insane were introduced. They gave way to electroconvulsive therapy developed in the late 1930s, which then fell out of fashion after the 1960s (and Ken Kesey's 1962 *One Flew Over the Cuckoo's Nest*) only to be quietly reintroduced in the past decades (Fulton, 1956; Kneeland and Warren, 2002). When Hannah Decker wrote her brilliant book on Freud's case of Dora, she was clearly appalled by the very notion of treating disorders of hysteria with electrotherapy, as if electrotherapy were identical with ECT (Decker, 1992: 11). If one could characterize the view of the post-1960s within and beyond the medical world, it would be that electrotherapy of all types (typified by ECT) were brutal, ineffectual and archaic.

### **The new electrotherapy**

Recently, vagal nerve stimulation has been popularly heralded as the newest breakthrough in the electrotherapy of depression following its use for the treatment of epilepsy (Donovan, 2005). This is very much parallel to the adaptation of anticonvulsive drugs for mood stimulation a decade earlier. Such treatment seemed to have a high (40%) rate of effectiveness in chronic and treatment-resistant cases of depression (Rush *et al.*, 2000). Ironically one of the most evident side effects is disruption of the voice, with hoarseness and coughing being evident. It has been claimed that the longer the pacemaker is present, the more effective the treatment becomes (Sackheim *et al.*, 2001). It must be stressed that such an approach is different from more conventional (and contested) forms of electroconvulsive therapy (ECT) as it is inherently non-convulsive. Such studies looked to figures of nineteenth-century electrotherapy such as James Corning as their predecessors and thus linked the 'new' and the 'old' electrotherapy (Groves and Brown, 2005). That nineteenth-century electrotherapy postulated quite different models of the mind and body, that the diagnostic criteria of 'epilepsy' and 'depression' were understood in radically different ways, that defining symptoms such as globus hystericus had vanished (or remained only in the realm of the laryngologist) and that the central discussion within this literature dealt with modes of application rather than questions of efficacy, were lost in this discussion.

The powerful view of early to mid-twentieth-century psychiatry (from Eugen Bleuler to Carl Schneider) had placed *language disturbances* of all types rather than voice at the centre of the diagnosis of syndromes such as schizophrenia. Even this radical substitution diminished after the 1960s. As mental illness became redefined by the application of psychopharmacology as a 'brain disease', the importance of all linguistic symptoms vanished. Today the reintroduction of electrotherapy in the form of vagal nerve stimulation follows the pattern of the re-somatization of mental illness. Freud's assumption that the response to electrotherapy had to do with suggestion, which can now be supported by

the parallel understanding of the alteration of brain structures through experience, has been replaced with a mechanical claim of the brain as a computer (Anon., 2006)

In the 1970s and 1980s some further work using animal studies was undertaken on the impact of the stimulation of the vagus nerve. It was only by the late twentieth century that vagal nerve stimulation was generally used for the treatment of epilepsy. It was approved in Europe in 1994 and in the United States in 1997 for this purpose. In 1998 the impact of vagal nerve stimulation was reported on patients with chronic depression (Groves and Brown, 2005). In 2001 the American FDA approved this therapy for a clinical trial of its efficacy.

The pacemaker, modelled on that of the heart pacemaker, is inserted subcutaneously in the chest and wired to the vagus nerve – the longest of the cranial nerves – and reaching to the colon, innervating organs of the neck, thorax and abdomen, which were stimulated for 30 seconds every five minutes or so. The irony is that while such interventions seemed to work in some cases, the claim was that even though it may not have reduced the number of seizures, it made some patients feel better. The next stage was to apply this to depression, as there was a clear need ‘for a well-tolerated and effective long-term treatment for patients who do not respond fully to first-line antidepressant therapies such as antidepressant drugs (ADD), psychotherapy and electroconvulsive therapy’ (Panescu, 2005: 68). In 2005 the U.S. Food and Drug Administration approved the use of such pacemakers for the treatment of depression (Groves and Brown, 2005). Yet,

the VNS Therapy System can now be used as treatment for chronic or recurrent depression for patients 18 years of age or older who are experiencing a major depressive episode. The system can only be used as adjunctive therapy, which means that patients still need to continue with their ADD medication. (Panescu, 2005: 72)

Suddenly there is a new patient population for a new (old) therapy.

Remember that forty years earlier the ‘vagotomy’ was the therapy of choice for the treatment of the duodenal ulcer. It was developed in the early 1940s and became the intervention seen as ‘cutting edge’ by the 1960s. Duodenal ulcer was seen to ‘persist throughout life and ... conservative treatment does little more than assist in inducing a remission’ (Kay, 1969: 1). The vagotomy was part of a vogue of surgical intervention that began in the 1950s. It was seen to be so successful that a ‘recurrent ulcer after vagotomy and a drainage procedure must be regarded as a surgical disease’ (Griffen, 1969: 188). Yet there was also an acknowledgement that some patients ‘after vagotomy and drainage, continue to have moderate or severe symptoms or complications which interfere considerably with their work or enjoyment of life’ (Williams, 1969: 197). Beginning in 1982, Barry J. Marshall and J. Robin Warren claimed that the gastric or duodenal ulcer was the result of a bacterial infection. For

this they received a Nobel Prize in Physiology or Medicine in 2005 for their discovery of 'the bacterium *Helicobacter pylori* and its role in gastritis and peptic ulcer disease'. The vagotomy quietly vanished.

The wide range of electrotherapies for psychiatric disorders that has been proposed now follows that somatic model (Mayberg and Lorenzo, 2002; Penry and Dean, 1990). The best that can be said of them is that 'success has remained questionable' (Niedermeyer, 2003: 27). Little interest is shown for the classic symptoms of nineteenth-century mental illness such as globus hystericus, as they have become the property of another medical specialty. The treatment of the voice and speech is now quite independent of its function as a symptom of mental illness: transcranial electric stimulation has been used in cases of speech disorders relating to stroke and Parkinsonism. Marcy Freed began to use electrical stimulation in dysphagia therapy in 1995 and received the FDA's approval in the USA for her 'VitalStim' device in 1997. These are now treatments used by laryngologists for pathologies of the voice just as vagal nerve stimulation has entered into the treatment of psychiatric disorders such as depression.

'Race' as a category of predisposition seems relatively lacking in this recent discussion, even with its reintroduction in the 1990s into contemporary medicine, but this may be an artefact of the slow acceptance of such categories in fields that do not claim any genetic predisposition (Gilman, 2007). The re-somaticization of mental illness and the reintroduction of electrotherapy rests on a new sense of the biological underpinnings of mental illness. This new biology has made claims on 'race' and 'gender' in terms of evaluating efficacy. Yet in the arena of electrotherapy such claims seem to be missing. Perhaps an echo of the older association of the highly stigmatized nature of mental illness and the association with the murder (euthanasia) of the mentally ill in Nazi Germany has caused this to remain an uncomfortable tale. Indeed, the 1960s' association of electrotherapy and ECT with torture and the Nazis may well still impact on the categories of analysis available to the psychiatrist. But this is a tale still being unravelled.

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