

French Neuropsychiatry in the Great War: Between Moral Support and Electricity

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In World War I, an unprecedented number of soldiers were suffering from nervous disturbances, known as war psychoneuroses. Mechanisms of commotion, emotion, and suggestion were defined in order to explain these disturbances. In France, emphasis was placed on the mechanism of suggestion, based on pithiatism, introduced by Joseph Babinski (1857–1932) before the war to highlight the concept of suggestion and its hazy border with simulation. As a result, many soldiers suffering from war neuroses became considered as simulators or malingerers who were merely attempting to escape the front. A medical-military collusion ensued with the aim of sending as many of these nervous cases back to the front as possible through the use of painful or experimental therapies. Aggressive therapies flourished including torpillage, a particularly painful form of electrotherapy developed by Clovis Vincent (1879–1947) and subsequently by Gustave Roussy (1874–1948). At the end of the war, some psychiatrists, such as Paul Sollier (1861–1933), Georges Dumas (1866–1946), and Paul Voivenel (1880–1975), developed a more psychological approach. In Great Britain, where Charles Myers (1873–1946) coined the term shell shock in 1915 to describe these cases, psychological theories were more successful. In Germany, aggressive therapies developed by Fritz Kaufmann (1875–1941) emerged in the second part of the war. In Austria, the future Nobel Prize winner Julius Wagner-Jauregg (1857–1940) was accused of performing violent therapies on patients with war neuroses. These methods, which now seem barbarian or inhuman, were largely accepted at the time in the medical community and today should be judged with caution given the cultural, patriotic, and medical background of the Great War.

Keywords war neuroses, electrotherapy, World War I, torpillage, posttraumatic stress disorders

Introduction

In August 1914, when World War 1 (WW1) began in Europe, neuropsychiatric disturbances in soldiers were not unheard of. During the Napoleonic Wars, several conditions associated with *vent du boulet* (lit., “wind of the cannonball”) had been mentioned and Silas

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Weir Mitchell (1829–1914) had raised the issue during the 1861–1865 American Civil War (Keen et al., 1864). Neuropsychiatric disturbances had been reported and analyzed during the 1870 French-Prussian conflict, leading to the concept of *simulated diseases* (Boisseau, 1870). Nearer to WW1, during the 1904–1905 Russo-Japanese war and the 1912–1913 Balkan conflicts, numerous cases of war neuroses were also reported.

Early on in WW1, an unprecedented number of soldiers were suffering from nervous disturbances. This was probably connected to the dramatic increase in the power and force of new weapons and the novel fighting tactics including the spread of trench warfare. The mechanisms leading to these *nervous cases*, which gradually became known as war psychoneuroses, remained controversial. Several neuropsychiatrists emphasized the role of psychological factors associated with life at the front and the sight of atrociously mutilated bodies of comrades. Others drew attention to organic factors related to the new force of explosions resulting in specific yet less visible damage to the brain and spinal cord.

In France, these neuropsychiatric disorders, some of which were new, led to the resurrection of the ghost of hysteria. Over the preceding years, the development of ideas on hysteria had been associated with the work of Joseph Babinski (1857–1932), who introduced the concepts of *pithiatism* and *autosuggestion*. These concepts played a vital role in largely erasing the border between hysteria and simulation. As a result, many soldiers suffering from war neuroses quickly became considered as simulators or malingerers who were merely attempting to escape the front. A medical-military collusion ensued with the aim of sending as many of these *nervous cases* back to the front as possible through the use of painful, experimental therapies. Between 1915 and 1917, aggressive techniques flourished including *torpillage*, a particularly painful form of electrotherapy developed by Clovis Vincent (1879–1947) and subsequently by Gustave Roussy (1874–1948). For a long time, the official use of such aggressive treatments remained poorly documented, partly due to the active involvement of some of the great names of neurology. However, certain more recent studies have examined these treatments, as well the abuse and deviations associated with their use, from a medical perspective (Tatu, Bogousslavsky, Moulin, & Chopard, 2010; Tatu & Bogousslavsky, 2012).

In other European countries involved in WW1, psychological theories on war psychoneuroses were more successful, especially in Great Britain. In Germany, the concept of traumatic neuroses, which had become well established before the conflict, was quickly applied to war-related *nervous cases* before the threat of defeat shifted the focus towards the problem of simulation. Therefore, the use of aggressive therapies emerged at the end of the war in Germany, whereas, in France, a more empathetic, psychological attitude developed.

The purpose of this work is to describe the organization of wartime neuropsychiatry in France and the therapies used to treat war psychoneuroses. We will then consider this subject from a more European perspective, drawing on examples from England, Germany, and Austria.

French Neuropsychiatry in War

The French health service was particularly ill prepared for the 1914–1918 conflict and had not anticipated the number of soldiers that would suffer from neuropsychiatric disturbances. It had been emphasized at the 1909 Congress of Alienists and Neurologists that over 3 in 1000 soldiers had developed such problems during the Russo-Japanese war, but no practical measures were implemented as a result of this finding (Charpentier, 1919). From the beginning of the conflict, the French military health service, therefore, found itself faced with a large number of soldiers suffering from neuropsychiatric disturbances including some new conditions.

New War, New Syndromes

At first, the term “hysteria” was used to describe soldiers’ neuropsychiatric conditions when no visible lesions could be found. It was soon replaced by the term “war neurosis,” probably because there had been too much controversy surrounding the nature of hysteria in the preceding years. War psychoneurosis involved altered mental functions such as amnesia or confusion. Joseph Grasset (1849–1918), Paul Sollier (1861–1933), and Gustave Roussy proposed their own classifications, which, in fact, were very similar (Grasset, 1917; Roussy & Lhermitte, 1917; Sollier, 1918).

A few apparently novel syndromes or war neuroses were reported during WW1. The most famous is *camptocormia* or *bent trunk*, first described in 1915 by Achilles Souques (1860–1944), one of the last collaborators of Jean-Martin Charcot (1825–1893), and Inna Rosanoff-Saloff (1885–1980). In *camptocormia*, the pelvis is flexed over the thighs and extension of the trunk is impossible. The patient requires sticks in order to not fall forward, since the spine otherwise keeps its normal shape, in a completely different posture from that of someone just bending forward (Souques & Rosanoff-Saloff, 1915). Other clinical manifestations of war neuroses included various forms of anesthesia, palsies, abnormal movements, gait disorders, mutism, deafness, and blindness.

Psychoneurotic manifestations included confusional states, delirium, hallucinations, and amnesic disorders. Delirium and hallucinations sometimes took on a *military color* without differing from similar disturbances seen before the war. Some apparently new psychoneurotic syndromes were reported, such as the *bird syndrome*, in which a mute and immobile patient appears to remain nonreactive but quickly moves his gaze from target to target with short, brisk movements of the head, as if he were paying particularly close attention to his surroundings (Sollier, 1918).

Three main mechanisms were defined in order to explain these war-related neuropsychiatric disturbances: commotion, emotion, and suggestion. Commotion corresponded to the *vent du boulet* described during the Napoleonic Wars and was defined as disturbances occurring after an explosion but with undetectable nervous system lesions. An initial loss of consciousness often occurred. Emotion was caused by exposure to a traumatic experience, such as seeing mutilated bodies or hearing violent noises. It was typically associated with an uncontrolled flight reaction. The mechanism of suggestion was considered to be totally dependent upon the personality and goodwill of the soldier. War-related factors did not come into play. Suggestion was, in fact, often synonymous with conscious or unconscious simulation on the part of the soldier.

This mechanism of suggestion was mainly emphasized in the early stages of the conflict, along with the *all-hysteria concept*, which was supported by neurologists such as Gustave Roussy, Joseph Babinski, and Clovis Vincent. The psychiatric camp, which included Paul Sollier, Georges Dumas (1866–1946), and André Léri (1875–1930), focused more on psychological factors as well as, paradoxically, organic lesions. The *all-hysteria concept* was predominantly based on Babinski’s *pithiatism*, a neologism that he had introduced over a decade earlier to highlight the concepts of suggestion and autosuggestion and their hazy border with simulation. A critical consequence of these concepts was that any clinical manifestations were immediately suspected of being inauthentic and to have developed to mask a desire to escape the danger at the front.

The notion of simulation was therefore widely debated during the Great War and the concept of conscious and unconscious simulation was gradually introduced. While it was accepted that pure, conscious simulation was rare, it was emphasized that exaggeration and prolongation of symptoms were common, particularly as a consequence of autosuggestion.

Certain neurologists like Pierre Marie (1853–1940) proposed the concept of unconscious simulation, which further clouded the border with hysteria. Psychiatrists such as Maxime Laignel-Lavastine (1875–1953) preferred to speak of *illegitimate manifestations* (Laignel-Lavastine & Courbon, 1917). Paul Chavigny (1869–1949) pointed to the fact that hysterics were either considered to be simulators or organic patients, leaving no room for an intermediate psychopathological condition (Chavigny, 1916). However, the notion of simulation was also supported by the significant number of soldiers with self-provoked organic lesions and those who turned to self-mutilation by firearm or substance injection to cause abscesses as a way of escaping the front.

New War, New Treatments

Just like the wounded soldiers, the *nervous cases* with no apparent wounds had to get from the battlefield to the first aid posts by their own means or with the help of comrades. They were then transferred to *ambulances* (medically equipped mobile units) at the rear of the front, where basic surgery could be performed. The next step was the evacuation hospitals and, finally, the militarized inner zone hospitals.

Doctors at the first aid posts did not treat soldiers with neuropsychiatric disturbances as a priority, as they were already heavily involved with open traumas. Hardly any of the *ambulance* doctors had been specifically trained to handle such cases. For this reason, and also because these cases were rather unsettling, often involving strange behavior, they were usually quickly transferred to the rear.

In October 1914, in order to deal with the large number of patients requiring treatment, the ministry decided to set up specific neuropsychiatric centers in the main cities, run by local professors and specialists. The first to open was probably the one in Nancy, close to the 1914 front. It was launched by Louis Spillmann (1875–1940), who did not wait for the ministry's decision before developing the center (Spillmann, 1915). In Paris, Jules Déjerine and Pierre Marie took charge of the militarized neurological department at *La Salpêtrière*, while Joseph Babinski and Jules Froment (1878–1946) took over the one at *La Pitié*, with Achille Souques at *Paul-Brousse hospital* and Gilbert Ballet (1853–1916) at *Maison-Blanche*. In the provinces, Paul Sollier was in charge in Lyon, André Léri in Rennes, Henri Claude (1869–1946) in Bourges, Jean-Athanase Sicard (1872–1929) in Marseilles, and Joseph Grasset (1849–1918) in Montpellier. As an example, the center in Marseilles included 200 beds for patients with brain or spinal trauma, 70 beds for psychoneuroses and delirium cases, and 25 beds for presumed simulators (Sicard, 1915).

In some neuropsychiatric centers, the neurological and psychiatric divisions soon began to break away from each other. At the time, the distinction between neurology and psychiatry was far from clear. Hysteria clearly fell within neurology, delirious psychoses came under psychiatry, which was still often referred to as *alienism*, and most of the specialists in charge called themselves *neuropsychiatrists*. As a result, war psychoneuroses were usually handled indifferently by physicians, who had been predominantly trained in either organic neurology or psychiatry.

Doctors at the military neuropsychiatric centers often complained about the delayed arrival of *nervous cases* and emphasized the need for better initial management at the front, particularly to handle the simulators. The *neuropsychiatric centers of the armies* were then created at the beginning of 1915, at the particular request of a group of younger doctors led by Gustave Roussy. These centers were established as near as possible to the front, with a capacity of 30 to 150 beds (Roussy & Boisseau, 1916).

These centers were not only successful in treating soldiers suffering from neuropsychiatric disturbances but several advances in clinical neurology were also achieved. At the sixth army center, Georges Guillain, Jean-Antoine Barré (1880–1967), and André Strohl (1887–1967) described acute polyradiculoneuritis (Guillain, 1916). Peripheral nerve lesion reports were carefully studied by Jules Froment and Jules Tinel (1879–1952) (Froment, 1915; Tinel, 1915). The work carried out by doctors at the military neuropsychiatric centers fuelled the specialist meetings on war neurology of the *Société de Neurologie de Paris*.

The frontline neuropsychiatric centers therefore faced the difficult task of treating soldiers suffering from war psychoneuroses. The treatment of these soldiers was intended to identify potential simulators, to quickly treat them to enable their return to the front, and to avoid the *moral contagion* of the condition (Damaye, 1916). This *moral contagion* had already been observed with camptocormia, causing epidemics in certain units (Marie, 1917). The early detection of simulators was intended to prevent the transformation of an unconscious simulator into an organized, conscious one. From this perspective, medical assessments were often not dissimilar from police questioning and clinical examinations included more and more traps to detect nonorganic lesions and to confound simulators.

A real medical-military collusion therefore ensued within the French military to encourage the quick return of as many soldiers as possible to the front and to prevent unnecessary evacuations to the rear. This collusion was undoubtedly a major factor in the development and implementation of aggressive management programs for war neuroses.

At first, most of the techniques used for the treatment of war psychoneuroses were based on isolation therapy, which had been specifically developed by Jules Déjerine and colleagues, and by Paul Sollier (Déjerine & Gauckler, 1915). Aside from its potential therapeutic virtues, the aim was to seclude frightening patients and to prevent the contagion of certain manifestations. Isolation was coupled with *persuasion*, a form of psychotherapy that was supposed to eliminate the effects of autosuggestion. It involved the doctor repeatedly telling the patient that he was improving and healing. The sudden increase in cases of war neuroses called for the use of more drastic measures and provided a strong incentive for therapeutic experimentation. The injection of substances like ether or strong emetics, forced physical mobilization, icy showers, and other adjuvant methods were all used (Lortat-Jacob & Buvat, 1916; Roussy & Boisseau, 1917). Doctors at the military neuropsychiatric centers quickly realized that the most effective adjuvant treatment was the use of electricity.

Torpillage and Electric Psychotherapies

Electric therapy was not a completely novel technique in 1914–1918; Wilhelm Erb (1840–1921) and others had been using it since the latter part of the nineteenth century. In France, Charcot and his school were already using it at *La Salpêtrière* hospital. An innovation of the Great War, however, was that electric therapy aimed at producing pain and was coupled with firm psychotherapy using words suggesting improvement and cure. Electric therapy became the preferred method of managing *nervous cases* and was also the subject of experimentation. For example, Babinski used intense faradic currents in the pharynx of mute patients (Babinski, 1915). However, well-codified procedures for electric psychotherapies were soon established, first by Clovis Vincent, and then by Gustave Roussy.

Clovis Vincent, a favorite pupil of Babinski, behaved heroically during the Argonne infantry fighting in 1915, replacing commanders who had been killed, even though he was a battalion doctor. He was then appointed as assistant to professor Laignel-Lavastine at

the military neurological center of Tours in western France. There, he improved his mentor Babinski's technique of persuasive electric therapy for hysterics, replacing galvanic current with faradic current and introducing a program of forced physical rehabilitation. This was when soldiers started using the term *torpillage* (lit., "torpedoing"), because treated patients described being *turned upside-down like by a torpedo* (Rimbaud, 1916). Vincent himself typically used military terms to describe the therapy sessions: "To get them, we had to fight hard" (Vincent, 1916a).

Having been in operation for six months, Vincent reported that in Tours, 300 soldiers had been cured and sent back to the front, with less than 3% of patients resisting treatment. Extrapolating that figure, he estimated that between 15,000 and 20,000 men could be sent back to fight if his method were to be adopted in all neurological centers (Vincent, 1916b). Like Babinski, Vincent was not really interested in the causes or mechanisms of hysterical manifestations; he focused solely on curing patients. For the same reason, he showed little interest in distinguishing simulators from hysterics.

Significant success in treating soldiers led to the popularization of Vincent's method far beyond his own center. Jules Déjerine introduced Vincent's electrotherapy technique at *La Salpêtrière* hospital and suggested the possibility of an even more painful therapy in case of failure. In their 1916 statistics, only 5 out of 63 cases of war neuroses did not respond to treatment, 19 cases were cured and sent back to the front, and 27 cases showed marked improvement (Déjerine, 1916). In his description of a session at a frontline neurological center, psychiatrist André Gilles emphasized the importance of the theatrical nature of the treatment: "I warned the subject: My little fellow, keep quiet! I am going to double the current; yes, I know, this will be painful, but we must do it, since you want to heal. Although I did not increase the current at all, at the next shock the subject started to gesticulate more and begged for pity" (Gilles, 1917).

In response to the controversy surrounding the painful nature of the treatment, Vincent retorted: "What is that pain in comparison to that of the soldiers who kept Verdun in our hands?" (Giroire, 1971). While most official authorities and medical societies including the *Société de Neurologie de Paris* approved and supported *torpillage*, rebellions started to develop among soldiers who refused electric therapy. In 1916, following a dispute involving a physical fight between Vincent, a former amateur boxer, and the zouave Baptiste Deschamps, who had refused treatment, a military trial began involving heated media coverage (Roudebush, 1995). Deschamps received a symbolic sentence and Vincent abandoned his work at the center in Tours. He asked to be sent to the front, where he went at the beginning of 1917.

The Deschamps scandal and other similar affairs were closely followed by the press, which raised the issue of the appropriateness of forcing patients to undergo any form of treatment. Certain authorities considered treatment refusal to be a sign of simulation, while others started to speak of a war against the wounded.

The closure of the Tours center left a void, which sparked bitter complaints from Gustave Roussy, a Swiss-born pupil of Déjerine, who seemed to have developed a particularly strong patriotic sentiment for France. This led him to set up a new center for chronic war psychoneuroses, which opened early in 1917 in Salins-les-Bains, close to the Swiss border, and had 250 beds. The term *torpillage* was abandoned and replaced by *psycho-faradic treatment*, which differed very little from the Babinski-Vincent method (Roussy et al., 1917).

Roussy began by using nonpainful currents in order to gain the soldiers' acceptance but soon moved on to stronger currents. He emphasized the need for pain if the treatment were to be a success, as well as the need to stimulate sensitive parts of the body such as the

soles of the feet, the scrotum, and the lips. Forced physical training, icy showers, a milky diet, and isolation were also used in combination (Roussy, 1917).

By the end of 1917, statistics showed that out of 545 patients, 37% had been sent back to the front and 31% to an auxiliary service (Roussy et al., 1918). Other centers began to send difficult patients to Roussy's center. However, because the number of patients increased, including the difficult cases, there was also a rise in refractory cases and patients refusing or fleeing from treatment. Against ministerial rules, Roussy started to punish patients who did not comply with his management program, and in January 1918, a new scandal similar to the Deschamps affair broke out when six soldiers were taken to trial after refusing Roussy's therapy. Although they were convicted, their sentence was mild and symbolic, which signalled for further treatment refusals (Le Petit Comtois, 1918). From March 1918, Roussy began to refuse new patients at the center and, after an administrative decision that certain therapies would be regularly inspected by experts, the psycho-electric method became less and less common and eventually faded away.

The novelist Louis-Ferdinand Destouches, alias Céline (1894–1961), called on his own experience as a wounded soldier during the Great War to describe “torpillage” and doctor Roussy in his novel *Voyage au Bout de la Nuit*. Céline was wounded in October 1914 by a bombshell explosion that lifted him from the ground. In a state of concussion, he underwent electric shock treatment in 1915 at Val-de-Grâce Hospital. Roussy appears in *Voyage au Bout de la Nuit* under the pseudonym of Professor Bestombes (Céline, 1981).

A European Perspective

Although electric psychotherapy was used by the doctors of all armies involved in the conflict, systematic programs of *torpillage* remained largely a French speciality. This difference was probably partly the result of differences in the military-medical attitude towards war neuroses. For countries with no fighting on their own territory, like the United Kingdom, or those that joined the war later than France or Germany, like Italy, patient management was generally more focused on psychological aspects than on firm physical methods.

However, exceptions were seen in all countries. In France, there were also those doctors who were strongly opposed to therapies involving physical constraint, such as Paul Voivenel (1880–1975), who emphasized the psychological aspects of the condition (Voivenel, 1918). Some of the cruellest types of treatment were seen in the United Kingdom, despite the fact that there had been a general tendency towards providing *moral support* to patients since very early on in the conflict. The prospect of the final outcome of the war also influenced the medical-military attitude. This was particularly apparent in Germany. The concept of traumatic neuroses had flourished well before the war, but the psychological aspects of patient management fizzled out as defeat approached during the final years of the conflict, with a parallel increase in firmer physical therapies. In France, a more empathetic, psychological approach developed mainly during the second half of the war, while *torpillage* and other strong physical therapies disappeared from the armamentarium.

Shell Shock

The term *shell shock* was coined in 1915 by Charles Myers (1873–1946), who published reports of three cases he had seen in the *Le Touquet casino* in Normandy, where patients were being transferred from the front (Myers, 1915). Myers was a psychiatrist who was performing his duties as a captain. He summarized *shell shock* as a “punch on the head

without any pain after it," emphasizing previous personality and emotional issues and the triggering of *fixed ideas*, in a similar way to Pierre Janet's (1859–1947) *subconscious fixed ideas* and the concept of posttraumatic stress disorder.

However, Myers' influence was somewhat diminished by two factors. The first was the development of a more repressive attitude of medical-military authorities towards patients under the influence of Myers' superior, Gordon Holmes (1876–1956), who showed little interest in psychological issues. The second was the introduction in 1916 by Sir Arthur Sloggett (1857–1929) of the term NYDN (Not Yet Diagnosed, Nervous) instead of *shell shock* (Shephard, 2001).

Myers' contribution was then largely disregarded by Holmes, but the psychological current found another defender in William Rivers (1864–1922), who developed specific centers at the rear such as the *Maghull military hospitals* near Liverpool and the *Craiglockhart war hospital* near Edinburgh. Strikingly, although Rivers was a pupil of Hughlings Jackson (1835–1911) and had a mainly organic background, he introduced *Freudian-like* concepts to the management of psychoneuroses (Rivers, 1920).

In Great Britain, statistics reported 65,000 *nervous cases* during WWI, of which two thirds required prolonged treatment. While electric therapy certainly became less popular than in France, it was introduced by Edgar Adrian (1899–1977) and Lewis Yealland (1884–1954) in 1916 at the *National Hospital for Nervous Disorders*, on the basis of French techniques. Adrian and Yealland (1917) emphasized *the weakness of the will and of the intellect* of their patients, whom they treated with "A little plain speaking accompanied by strong faradic current." Pain was considered necessary both for therapeutic and disciplinary reasons, and a stepwise, significant increase in the current was standard practice, in the suggestive environment of a poorly lit *electric chamber*, which was part of the therapy. Additional strategies included hot plates in the mouth and lighted cigarettes on the tongue, while the patient was instructed that there was no way out of the electric chamber until they were completely cured. When leaving the chamber, the patients were then congratulated as war heroes (Adrian & Yealland, 1917). Electric therapy was introduced in a few other places, such as the *Shell Shock Hospital* nearby Dartmoor, where Adrian Hurst (1879–1944), who had studied with Babinski and Déjerine, combined faradisation, suggestion, and hypnosis before abandoning electric treatment, which he deemed traumatizing and rather ineffective.

Granat Neuroses

In Germany, the main classification of war neuroses was established in 1915 by Karl Birnbaum (1878–1950; Birnbaum, 1915). It differed little from the other classifications, except that it strongly emphasized the concept of traumatic neurosis, which had been developed previously by Hermann Oppenheim (1858–1919). *Granat-neurose*, *Marmite-neurose*, and *Schreck-neurose* were the German terms used for describing *shell shock*.

The therapeutic use of electric current to treat nervous disorders had sparked heated debate in Germany before the Great War. The 1891 Frankfurt convention, which brought together leading neurologists and psychiatrists, rather contradictorily addressed the questions regarding the type of current that should be used, how it should be administered, and its real effects on the nervous system (Steinberg, 2011).

Because the concepts were initially more oriented towards psychological factors and depression, the initial management focused on suggestion, psychological discussion, hypnosis, and isolation rather than a more physically aggressive therapy. Max Nonne (1860–1959) developed suggestion methods, which were even referred to as *hypnotic*

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