

# Evaluating Mesmerism, Paris, 1784: the controversy over the blinded placebo controlled trials has not stopped

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In 1778 Dr Anton Mesmer arrived in Paris from Austria with his new theory of illness and the treatment he had created. He believed in the power of “animal magnetism”, a universal fluid to cure illness. Groups of his patients gathered in a room surrounding a large enclosed wooden tub with iron wands protruding out of it. The patients would hold the wands and touch them to their afflicted parts. The animal magnetism would flow from the tub through the wands to the patient. Patients were convinced they were cured and sometimes went into hysterics or passed out. Mesmer’s therapeutic salon became the fashion and the aristocracy and wealthy crowded in, making Mesmer’s practice a very profitable one. For the large fee of 100 gold louis, people could join the Society he founded, learn of his methods, and hope to prosper as well. Mesmer’s new treatment and ideas were discussed at the highest level at court. The wife of King Louis XVI, Marie Antoinette (1755–1793), was originally from Austria. She helped Mesmer with her patronage and referred Austrian nobility to him for treatment. She wanted to offer him a government pension to teach his theories of animal magnetism. The Parisian medical establishment was not pleased to see many of their highest paying patients leaving them to seek the excitement of Mesmer’s salon. Between the enthusiasm of his wife and the anger of the medical establishment, what could a King do other than appoint a study Commission?

The first report in 1784 by the Royal Academy of Medicine of France simply said that Mesmer’s theory was not consistent with the accepted medical dogma of the day. Since the accepted medical theories of that time are nearly as foolish as Mesmer’s, and there was no discussion of outcomes, this report is unconvincing.

## THE COMMISSION

For his Commission the King chose the best scientific minds of the day to examine Mesmerism. Benjamin Franklin was chosen to chair the committee, although he did not play a very active role in its work. Franklin, then US Ambassador to France and an expert in magnetism, electricity, and lighting, was wildly popular in France. Other members included Jean Bailly (1736–1793), an astronomer who established an observatory in 1760 and studied Haley’s Comet and Jupiter’s satellites; Antoine-Laurent de Jussieu, professor of botany at the Medical Faculty of Paris whose classification of species became the basis of plant classification and in 1808 he became President of the University of Paris; Antoine-Laurent Lavoisier (1743–1794) who first named oxygen, founded quantitative chemical analysis, and was a creator of the modern concept of chemical elements; Joseph Guillotin (1738–1814) who worked to make executions more humane and swift by refining and testing on animals and cadavers the device which was later to be named after him.

The Commission set to work. Mesmer refused to cooperate so they had to turn to his former understudy, Charles D’Eslon, who had set up his own Mesmeric practice. The Commissioners listened to lectures about the theory, observed the process of care, and conducted outcome studies.

Mesmer described animal magnetism as “a fluid universally diffused, the vehicle of a mutual influence between the celestial bodies, the earth and the bodies of animated beings”. Like the gravitational pull of the moon on the earth’s tides, Mesmer’s animal magnetism cannot be seen, but it is universal and all animal bodies are equally susceptible to it. “Animal magnetism is capable of curing immediately diseases of the nerves. It holds out to us a sovereign instrument for securing the health and lengthening the existence of mankind”.

The Commissioners observed treatment in D’Eslon’s office. The patients were arranged in ranks around his tub, each with a branch of iron. A cord was wrapped around their bodies and they held hands to pass the fluid between each other. A piano was played and the therapeutic session could last three hours. The rapidity of the music had its effect. Some of the patients were calm and unaware of any sensation, others coughed and spat, while a third group became agitated and tormented by convulsions—which were extraordinary by their frequency, violence and duration—with shrieking, tears, immoderate laughter and sometimes coughing up blood. As soon as one person convulsed, the cords were tightened and others were affected. These “mesmeric crises” were often followed by languor and even drowsiness. “Nothing can be more astonishing than these convulsions. He who has not seen it, can have no idea of it.” Individual patients gave testimonials of their cures.

In the empty treatment salon the Commissioners put an electrometer and compass next to the mesmeric tub and found nothing. They commented: “The uninterrupted observation of ages proves that nature alone and without our interference cures a great number of persons”.

## THE EXPERIMENTS

The experiments were based on the logic of Mesmerism. The Commissioners underwent treatment themselves, separate from the crowds, but not one of the Commissioners felt any sensation. As a result, they performed a set of experiments to determine to what degree the power of the imagination can influence our sensation and to demonstrate whether this can be the cause in whole or in part of the effects attributed to magnetism.

One experiment was carried out in Franklin’s garden. D’Eslon was sure that, if he magnetized a tree, a susceptible patient of his choice would be affected by touching it. The patient was brought before four trees, eyes covered, and asked to embrace them. Each tree affected him and before he got to the fourth tree he fell into a crisis and fainted. During this time D’Eslon was “mesmerizing” a fifth tree.

In another experiment a patient was seated before a closed door and told (falsely) that D’Eslon was behind it performing his magnetic operation. In a minute the patient went into a crisis. Another patient was presented with several china basins which she was falsely told had been “magnetized” and she fell into a complete crisis. After she had recovered, a “magnetized” basin was presented to her and she drank from it with perfect calmness.

As a result of these placebo controlled blind trials, the Commissioners concluded that Mesmer's universal fluid had no existence and that imagination, imitation, and touch were the true causes of the observed effects in the Mesmeric salon. As far as we know (and we invite readers to correct us), this is the first coordinated series of placebo controlled blind trials in medicine. One might think this clear study would have settled the question once and for all—but of course it did not.

The third study was secret and not published. The Commissioners observed that crises were more frequent in women. Most women who came for treatment were not really ill; many came "out of idleness or for amusement". The magnetizer applied his hand to the affected region in close proximity: "the reciprocal attraction of the sexes must consequently be excited in all its force. It is not surprising that the senses are inflamed. The more modest the women, the less likely they are to understand the reasons for these effects. This treatment must be dangerous to morality."

### THE OUTCOME

A furious pamphlet war ensued. Dr Mainauduc had learned mesmeric practice and opened an office in London in the hope of repeating Mesmer's success. He published a book consisting of hundreds of letters from patients who believed they were cured. Others pointed out that patients who died, in spite of Mesmeric therapy, were unable to give their opinions. Mesmer complained that the Commission had not observed the discoverer's treatment, but only that of his pupil D'Eslon.

Mesmer's practice continued but declined. The French Revolution brought an end to the lives of King Louis XVI, his wife Marie Antoinette, Bailly, and Lavoisier, who all lost their head to Dr Guillotin's machine. Bailly and Lavoisier were hated "tax farmers" for the King.

One of Mesmer's students, Armand Puysegur, returned to his rural home and transformed Mesmer's ideas into what we now know as hypnotism, which continues to this day. Mesmer had a clear effect on patients, as does hypnotism. The reasons for the undoubted effects of hypnotism continue to be debated today.

The Commission's research resulted in the eventual rejection of animal magnetism as the theory behind Mesmer's therapy. Mesmerism has been seen as a step in the evolution

towards modern psychotherapy. The debate over the Commission's report continues today. In 2002 David Spiegel concluded that this use of the scientific method ultimately benefited both hypnosis and medicine, while a critique of the Franklin report by Lynn and Lilienfeld found their methods flawed.

### HEROES AND MARTYRS?

For students of the evaluation of quality of care, Bailly and Lavoisier are probably the primary heroes, even if their heads rolled in the French Revolution. Mesmer, D'Eslon and Mainauduc and their followers believed themselves martyred in the cause of a theory and therapy they believed in and watched with their own eyes. King Louis, and particularly his wife, do not get a good press to this day. The historical winners are the three participants who—along with sandwich, boycott and chauvinism—have the rare honor of having their names become regular words in the dictionary. Rural New Englanders today know of Franklin stoves. Guillotine and mesmerization are in today's English and French dictionaries.

### WHERE TO LEARN MORE

Much of the original literature on this topic is very rare and must be sought at the Wellcome Library in London, The Bakken Library in Minneapolis, the Albert Moll collection at Vanderbilt Medical School, and in France. Also see the 50th anniversary issue of the *International Journal of Clinical and Experimental Hypnosis*, Volume 50, No. 4, October 2002 where this evaluation controversy still rages; the articles by Spiegel and by Lynn and Lilienfeld can be found here. Further references:

- Best M, Neuhauser D, Slavin L. *Benjamin Franklin: verification and validation of the scientific process in health care as demonstrated by the "Report of the Royal Commissioner on Animal Magnetism and Mesmerism"*. Victoria, British Columbia, Canada: Trafford Publishing, 2003.
- Crabtree A. *Animal magnetism, early hypnotism and psychical research: an annotated bibliography*. White Plains, NY: Kraus

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