

THE BENJAMIN FRANKLIN REPORT ON ANIMAL MAGNETISM: A SUMMARY COMMENT

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We summarise and discuss the Report of the first scientific investigation of what is now called hypnosis. This investigation of animal magnetism in 1784 by a group of scientists was headed by Benjamin Franklin. We examine the claims investigated, the methods employed, and the conclusions reached. The essential theoretical and methodological concerns of the first investigation continue to be seen in contemporary research on hypnosis.

The first systematic investigation of what we now call hypnosis was conducted by a group of scientists commissioned by Louis XVI of France on 12 March 1784 to investigate animal magnetism as it was described and practised by Franz Anton Mesmer. The Royal Commission was presided over by Benjamin Franklin, who was the American Commissioner to France (for discussions of Franklin's activities in France, see Hale & Hale, 1888; Lopez, 1966; Lopez & Herbert, 1975) and was composed of members of the Academy of Sciences, the Royal Society of Medicine, and the Faculty of Medicine. The Report of the Commission was submitted on 11 August 1784 by Franklin, Majault, Le Roy, Sallin, Bailly, D'Arcet, De Bory, Guillotin, and Lavoisier (Franklin et al., 1785; note all page numbers appearing in parentheses refer to this Report as it was reprinted in Tintertow, 1970). The Report described a series of astute observations and clever experimental manipulations that can be said to be sophisticated even now, more than 200 years later (see also Tintertow, 1970; Sarbin & Coe, 1972; Sheehan & Perry, 1976; Shor, 1979).

A measure of the influence of the Franklin Report is seen in the changing fortunes of Mesmer during the months of 1784. Prior to the submission of the Report, Mesmer had been the toast of Paris, dealing with many wealthy patrons and associated with D'Eslon, who was the physician of Count d'Antois, the future Charles X. Following publication of the Report, Mesmer was a focus of public scorn and ridicule (for discussions of the rise and fall of animal

magnetism, see Barrucand, 1967; Binet & Fere, 1888; Darnton, 1968; McConkey & Perry, 1985; Podmore, 1964). In this paper we provide a summary and discussion of the Franklin Report and focus on the claims investigated, the methods employed, and the conclusions reached.

CLAIMS INVESTIGATED

The commissioners initially defined the area of investigation as the theory and practice of animal magnetism as outlined by Mesmer, and they focused their investigation on the corresponding views and practice of D'Eslon (Bloch, 1980). Animal magnetism was considered "a sovereign instrument for securing the health and lengthening the existence of mankind" (p. 84). More specifically, the basis of animal magnetism was claimed to be:

A fluid universally diffused, the vehicle of a mutual influence between the celestial bodies, the earth, and the bodies of animated beings ... The animal body is subject to the effects of this agent; and these effects are immediately produced by the agent insinuating itself into the substance of the nerves ... The action and the virtue ... are capable of being communicated from one body to another, animated or inanimate ... Though the fluid be universal, all animal bodies are not equally susceptible of it. (p. 83)

In addition, animal magnetism was claimed to be:

Capable of curing immediately diseases of the nerves and immediately other distempers; it improves that action of medicines; it forwards and directs the salutary crises ... by means of it the physician becomes acquainted with the state of health of each individual, and decides with certainty upon the causes, the nature and the progress of the most complicated distempers; it prevents their increase, and effects their extirpation, without at any time exposing the patient, whatever be his age, sex, or constitution to alarming incidents, or implausible consequences. (pp. 83-84)

METHODS USED

After defining the issues to be investigated, the commissioners conducted their investigation in a very systematic manner. They employed public observation, self study, case study and hypothesis testing.

Public Observation

Initially the commissioners observed the method employed by D'Eslon in his public practice. This involved assembling patients around a large circular wooden box filled with iron filings and water and out of which protruded lengths of iron that were angled and movable. This was to allow the patients to touch various parts of their body with the iron. Besides this *baquet*, patients were sometimes linked with a cord and sometimes held hands. With an harmonica playing in the background, assistants carrying iron rods magnetised the patients by "passes" with either their hands or iron rods over parts of the body. In particular, the patients were "magnetised by the application of

the hands, and by the pressure of the fingers upon the hypochonders and the regions of the lower abdomen" (p. 88). The commissioners observed that the patients exhibited a wide variety of behaviour in response to these techniques. Some patients displayed drowsiness and tranquillity, others appeared to be in pain, and others displayed convulsive seizures. Following Mesmer's theory, the commissioners adopted the notion of *crises* to describe this variety of behaviours. Further, contact with objects that had been magnetised (e.g., trees, and basins as used in later experiments by the commissioners) was also presumed to cause similar effects. They also observed that there were many more women than men experiencing the crises and it generally took one or two hours of magnetising before the crises occurred. Nevertheless, "when one had taken place, all the others commenced successively, and without any considerable interval" (p. 88).

In assessing the nature of their observations, the commissioners decided they could not conduct any experimentation in the public context since "too many things are seen at once for any of them to be seen well" (p. 88). They decided it was not necessary to attend any more public demonstrations unless they wanted to clarify observations they had already made or needed to make new observations if the nature of the public methods and effects changed. Further, they decided their task should be to "inquire into the possibility and existence of the magnetism" (p. 89). In addition, they decided to focus on the existence of magnetism and not to deal with the effects until they had determined whether it existed. The basis for this was that "the animal magnetism may indeed exist without being useful, but it cannot be useful if it does not exist" (p. 89). Interestingly, although the commissioners considered that if animal magnetism did not exist, then it could not have curative value, Franklin privately thought this logic was not entirely correct. He personally considered belief and hope to have powerful therapeutic effects, but realised that publicly endorsing the curative effects of something that could not be shown to exist could lead to medical quackery (McConkey & Perry, 1985).

After much debate among themselves, the commissioners decided there was no way to prove directly the existence of magnetism. Rather, its existence had to be inferred from its action upon "animated bodies." The commissioners debated whether this action should be observed in terms of "its solitary effects in the treatment of different diseases, or in momentary effects upon the animal economy and the perceptible changes there produced" (p. 91). Although D'Eslon argued strongly for focusing on the impact of magnetism on disease as the way of proving its existence, the commissioners decided that: "It would be absurd to choose a method of deciding upon the existence of this agent, which, by attributing to it all the cures performed by nature would tend to prove that it had an action useful and curative, when in reality, it might have no action at all" (p. 93).

D'Eslon continued to disagree, but Mesmer agreed that "it cannot be demonstrated that either the physician or the medicine causes the recovery

of the patient" (p. 93). The commissioners decided to focus on "the instantaneous effects of the fluid upon the animal frame excluding from these effects all the illusions which might mix with them" (p. 93). In their experimentation, the commissioners decided to focus on single subjects, some chosen for "their simplicity" and others "their intelligence" (p. 94).

Self Study

Initially the commissioners observed the effects of D'Eslon's methods upon themselves. These experiments were conducted in a setting separate from the public practice of magnetism, and they were restricted to the commissioners, D'Eslon, and D'Eslon's assistants. Although the procedures were those used as in the public setting, none of the commissioners experienced any sensations, "or at least none which ought to be ascribed to the action of the magnetism" (p. 95). After several attempts, including one that went over three successive days, without experiencing any effects they could not attribute to either "ordinary variations in the state of their health [or] from the pressure employed upon the region of the stomach" (p. 96), the commissioners "could not avoid being struck with the difference of the private experiments made upon themselves from the public experiments" (p. 96) they had observed. They decided that one possible explanation of this was the degree of health of the participants (although the commissioners pointed out that several of them were not well), and "resolved to make experiments upon persons really diseased, and ... chose them out of the lower class" (p. 96).

Case Study

The commissioners assembled, at the home of Benjamin Franklin who was ill during much of the investigation, seven ill people from the lower class. D'Eslon employed his methods but only three of the people reported any effects. Since the commissioners could not easily explain these effects, they decided to make use of a group of patients "from the polite world ... whose understanding made them capable of inquiring into and giving a faithful account of their sensations" (p. 98).

The commissioners assembled four ill people from the upper class, and these people were magnetised by D'Eslon. Two of them experienced effects and provided detailed descriptions of the sensations. In essence, one felt heat (rather than pain) in a diseased knee, and the other felt sleepiness (rather than nervousness) for a nervous disorder. Similar experiments were conducted with other people, including the ill Benjamin Franklin, and the commissioners found only 5 of 14 people experienced some effect of D'Eslon's techniques.

Across the various case studies, the commissioners noted that the effects they could not readily explain in terms of the physical manipulations used were possibly "augmented by moral causes" (p. 101). They described this as occurring when an individual "is introduced to a large company ... an experiment is performed on him ... which is new to him and from which he persuades

himself beforehand that he is about to experience prodigious effects ... and he thinks he shall contribute more to our satisfaction by professing to experience sensations of some kind" (p. 101). The commissioners considered such a situation to provide at least a reasonable alternative explanation to that of magnetism. In addition, they noted that the children and the "idiots" they had employed in these case studies did not experience any effects and argued that this was because those individuals were not able to determine whether they "ought to have felt anything" (p. 102). The commissioners decided that the effects they had observed "supposing their reality, were the fruits of anticipated persuasion, and might be operated by the mere force of imagination" (p. 102).

Hypothesis Testing

To investigate this possibility, the commissioners undertook experiments designed "to determine to what degree the power of the imagination can influence our sensations" (p. 102). Also, the commissioners began observing the work of Jumelin, who considered himself to be unassociated with either Mesmer or D'Eslon, but whose methods were very similar to the methods of those magnetists. Of 11 people who were magnetised by Jumelin, only one woman experienced any effects and the commissioners decided to employ her for their initial investigation of the impact of imagination.

This woman was blindfolded and magnetised, but could not determine the parts of her body towards which Jumelin was directing the magnetism. However, once the blindfold was removed she was magnetised again and rapidly experienced a crisis. Following this, she was blindfolded again and told that Jumelin (who was now out of the room) was magnetising her and she experienced another crisis. Finally, after 15 minutes Jumelin was brought into the room without the woman's knowledge and began magnetising her. The crisis decreased rather than increased. These procedures were repeated on two other people and the results were identical. The commissioners noted that the effects were similar to those observed in the patients of D'Eslon, even though some of the magnetism methods employed were the opposite. They concluded that the patients' "answers were determined by the questions that were put to them, that is, the question pointed out where the sensation ought to be" (p. 105). The commissioners decided to follow this line of inquiry further by taking individuals and "not to magnetise them at all, but to put to them questions so framed as to point out their answers to them" (p. 105). Further, the commissioners considered that "when no operation was performed upon [the patients], their sole answer ought to have been, that they felt no sensation at all" (p. 105).

To test this, Jumelin's servant was blindfolded and told he was being magnetised. He reported a variety of sensations. The more specific the information he was given (e.g., an iron rod placed near his forehead), the more specific his reported sensations became (e.g., pricking in his forehead). When an iron rod was held near his forehead, however, he reported no such

sensations. This procedure was repeated on "a man of learning" (p. 106) and the results were similar. In fact the sensations were reported to be much stronger than those he had experienced previously. Following these two subjects, the commissioners performed "an infinite number of [similar] experiments" (p. 106) and used a variety of magnetising procedures. Their findings indicated that no matter what procedure they employed, the results were similar. They concluded "that the imagination alone is capable of producing various sensations [and that imagination] entered for a considerable share into the effects attributed to animal magnetism" (pp. 106–107).

Although the commissioners considered they were correct in their line of inquiry and reasoning, the fact that the imagination manipulations had not led to major crises of the sort they had observed in the public setting concerned them. They decided to do further research to determine "whether by the mere energies of the imagination it were possible to produce crises" (p. 107). After much discussion of the way in which to investigate the issues, the commissioners decided to base their research on the following principle of magnetism: "when a tree has been touched ... every person who stops under it, ought to experience in a greater or lesser degree the effects of this agent" (p. 107). D'Eslon agreed to participate in this experiment provided he could bring a subject he knew to be highly susceptible. This was agreed and the experiment was conducted in the garden of Benjamin Franklin so that he could observe (Lopez & Herbert, 1975).

In the experiment, D'Eslon magnetised an apricot tree while the 12-year-old boy who was the subject remained in the house. The blindfolded boy was then brought into the garden and the commissioners positioned themselves to interfere with and/or observe any attempt at communication between D'Eslon and the boy. The boy had been instructed previously by D'Eslon to embrace the tree to maximise the effects of the magnetism. He was taken to successive trees that were 27, 36, 38, and 24 feet from the apricot tree and he displayed increasing signs of a crisis and fainted at the fourth tree. Although D'Eslon argued that the magnetism had spread to all the trees, the commissioners argued that if that were the case then nobody could "hazard a walk in the garden without the risk of convulsions, an assertion which is contradicted by the experience of every day" (p. 108). The commissioners concluded that the crisis displayed by the boy was due entirely to the influence of imagination.

They conducted several other experiments to explore this issue and used different procedures and different subjects. The results were always similar. For instance, two women whom D'Eslon considered highly susceptible were placed in different rooms of Franklin's house while D'Eslon was magnetising Franklin. One was told that D'Eslon had entered the room and was magnetising her and she displayed a crisis. The other was told D'Eslon was magnetising her through the closed door and she displayed a crisis. The crises these women displayed were entirely similar to those displayed in the public setting.

To explore the range and the limits of the impact of the imagination, the commissioners conducted several detailed case analyses. One of these focused on "the experiment of the magnetic basin" (p. 110). The aim of this experiment was for the subject to discover which of several basins was magnetised. When the subject arrived for this experiment, she began experiencing a crisis before even seeing the commissioners or D'Eslon, an event the commissioners thought indexed a "distinguished effect of the influence of imagination" (p. 107). After recovering from this crisis, she was presented successively with several china basins that were not magnetised but she increasingly experienced another crisis. To help her recover she was given a drink of water in the basin that was magnetised, and "she drank with perfect calmness and said that she felt much better" (p. 107). When she was asked about her crises in the absence of magnetism she replied, "If you did nothing to me, I should not be in the condition in which I am" (p. 107).

Another case analysis focused on one of Jumelin's patients whom he claimed to be able to deprive of speech through magnetism. In this experiment, a woman was blindfolded and was told she was being magnetised for speech deprivation, but there was no effect. The magnetising procedure was then performed without her knowledge, and again there was no effect. Then the blindfold was removed and the procedure was performed, and this time there was an effect. Finally, the subject informed Jumelin of the specific procedure to employ to maximise her speech deprivation. When this procedure was used there was a full effect. The commissioners noted that this highlighted "it was necessary to have a gesture with which [the subject] was already acquainted to reexcite her former ideas" (p. 113).

A third case analysis was an attempt to disconfirm the hypothesis that "the imagination is the true cause of the effects attributed to magnetism" (p. 113). In this experiment, the commissioners arranged for a highly susceptible woman to be magnetised without her awareness. They arranged for a commissioner to be seated on one side of a paper doorway magnetising the woman without her knowledge, and for the woman to be seated on the other side of the doorway being interviewed by another commissioner. Although this woman usually took less than three minutes to experience a crisis, she was still not experiencing any effects after 30 minutes. The commissioners decided that "the only reason for this difference must be that she was ignorant of the operation" (p. 115). To counter the argument that the commissioner was using the wrong technique or that the woman was not now susceptible, the magnetising commissioner entered the room and employed the same technique. The woman rapidly experienced a crisis.

These findings were considered by the commissioners to rule out all explanations based on magnetism, and to show "the efficacy of the imagination" (p. 117). They commented that the sometimes greater crises observed in public settings could be interpreted in terms of "various causes ... combined with the imagination, to operate, to multiply and to enlarge its effects" (p. 117).

CONCLUSIONS REACHED

Following the completion of their experiments, the commissioners reviewed their observations and findings in terms of three factors: touch, imagination, and imitation. Regarding touch, the commissioners noted that the magnetising techniques usually involved pressure being exerted upon "the chest, the pit of the stomach and sometimes the ovaries, if the patient is female. The hands are pressed with a greater or lesser stress, as are the fingers, upon these different regions" (p. 117). Based on the then current views of anatomy and physiology, the commissioners explained how the use of pressure on various parts of the body could lead to many physical reactions (e.g., vomiting, evacuation) typically associated with the crises displayed by magnetised individuals. The tendency for more women than men to display crises was explained in terms of the "methods employed upon the ovaries of the female sex ... [since] ... the empire and extensive influence of the uterus over the animal economy is well known" (p. 119). Partly because of this observation, the use of animal magnetism procedures on women was the subject of a second, secret report written exclusively for Louis XVI. This report examined animal magnetism and sexual matters, highlighted the threat that its use posed to women, and damned the procedures on moral grounds (see Binet & Fere, 1888).

Regarding the impact of the imagination, the commissioners noted that "the action and reaction of the physical upon the moral system, and of the moral upon the physical, have been acknowledged ever since the phenomena of the medical science have been remarked, that is, ever since the origin of science" (p. 120). This position allowed the commissioners to argue also about the effects of pressure upon parts of the body that "touch is not always necessary to these effects, it may be stated that the imagination may be sufficiently fertile in resources to produce them by its sole instrumentality" (p. 120). The commissioners argued that imagination (often used by them in a pejorative sense) was the major factor underlying the crises displayed by magnetised individuals. To explain how the crises were shaped by and intensified in the public setting, the commissioners reviewed the behaviour of individuals in large gatherings such as the theatre, military campaigns, and rebellious assemblies. From this review of crowd behaviour, they concluded that through imitation, "the multitude are governed by imaginations" (p. 121).

The major conclusion of the Franklin Report was that "compression, imagination, and imitation are therefore the true causes of the effects of this new agent known by the name of animal magnetism" (p. 123), and "imagination is the principle of the three causes" (p. 123). The negative emphasis the commissioners placed on the nature and effects of imagination can be seen in their statement that "the imagination is that active and terrible power, by which we are accomplishing the astonishing effects that have excited so much attention to the public process" (p. 123). The commissioners summarised their argument that imagination was the alternative explanation to the magnetic fluid Mesmer claimed to underlie animal magnetism by saying that, "since

the imagination is a sufficient cause, the supposition of the magnetic fluid is useless" (p. 124). They expanded this notion in their damning summary statement:

Therefore, having demonstrated by decisive experiments that the imagination without the magnetism produces convulsions, and that the magnetism without the imagination produces nothing, [the commissioners] have concluded with a unanimous voice, respecting the existence and the utility of the magnetism, that the existence of the fluid is absolutely destitute of proof, and that the fluid, having no existence, can consequently have no use. (p. 126)

The empirical findings of the Franklin Report on animal magnetism remain intact and unchallenged. What has been challenged, however, is the commissioners' view that imagination can have no positive effects. As mentioned above, although this was the view put forward in the Report, it was not Franklin's private view (McConkey & Perry, 1985). Indeed, Franklin (1881) pointed out in a personal letter that if people have an "expectation of being cured by only the physician's finger, or an iron rod pointing at them, they may possibly find good effects, though they mistake the cause" (p. 259). In a real sense, the Franklin Report was all about not mistaking the cause of hypnosis. That is, of course, what contemporary investigation of hypnosis is also all about.

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