
Either/Or: Spiritualism and the roots of paranormal science

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PART III

Good science versus bad science

In all of these discussions it has been assumed that 'to be scientific' had some simple, common and well-known meaning. To be scientific implied a degree of objectivity in experimental studies for both scientists and philosophers, which in turn meant that any scientist must approach his subject of study with no 'a priori' notions or prejudices. Once data had been collected a theory or hypothesis could be drawn from the data, not the other way around. Metaphysical speculation was to be minimized. This dictum had been explicitly expressed by Newton when he stated, "I frame no hypotheses." The true English translation of the Latin text of the *Principia* would change frame to feign, slightly altering the meaning of this phrase. But Pierre Duhem only discovered this mistake in translation during the same period of time. So the idea of 'not framing hypotheses' would still have affected the philosophical attitudes of the late nineteenth century scientists. There is no *a priori* reason to believe that those scientists investigating spiritualism were being anything but scientific in this manner. Yet even today we can see the residual prejudice against those scientists.

If one seeks information on Zoellner in the *Encyclopedia Britannica*, it will be found that Zoellner is portrayed as somewhat of a crackpot in spite of his astronomical investigations and accomplishments, about which little is said. If one seeks the same information in the *Dictionary of Scientific Biography*, Zoellner is described as an excellent experimental astronomer who became eccentric in his later life when he dealt with spiritualism. This discrepancy raises a distinct historical problem. Zoellner was not two different people. So either the account in the *Britannica* or the *DSB* is ambiguous if not completely erroneous. A possible answer to this discrepancy lay in the animosity between Zoellner and Mach's science. Mach was a historical winner in that history has favored Mach and his followers, while the movement in modern spiritualism has been a historical loser. Positivistic philosophy, as represented by Mach, either ruled science or greatly influenced scientific endeavors during the early part of the twentieth century, so spiritualism was seen as an aberration of science by many scholars of that era. This bias still remains.

In the course of history Mach's ideas came to constitute what was considered good science while the notions of spiritualism were held to be suspect and considered pseudo-scientific, of little worth in historical investigation. However, spiritualism must be regarded in the context of the science of the latter nineteenth century in order to

completely understand the era. It is not enough, nor is it proper, to consider spiritualism as either outside the history of science or as an aberration of science. Within this context, spiritualism can be viewed as an important component within the development of science. Important and relevant historical questions can then be raised regarding the role of modern spiritualism within the overall development of science. The first question that comes to mind deals with the reason that scientists rejected spiritualism and answering this question helps to define the science of that period. What constituted good science during the latter part of the nineteenth century? The answer to this question has two aspects: What constituted valid phenomena in the eyes of scientists (phenomena worthy of scientific investigation) and to what extent did metaphysical speculation have a proper role in science? Answering these questions, one can determine whether or not spiritualism was a valid part of science or an aberration.

In Mach's view, the study of either spiritualism or psychic phenomena would be superfluous to science. Mach saw the dualism of the 'physical and psychical' (Mach's words for matter and mind) as being artificial and unnecessary. (Mach, *Analysis of Sensations*, p.41) But Mach's view was not valid for the whole of science. It was only during the same period in which modern spiritualism was current that Mach formulated his philosophical views on science, so Mach's philosophy could not have influenced scientific thought just prior to that time period when modern spiritualism was evolving. Instead, Mach's opinions were reactions to the same stimuli and factors that gave rise to modern spiritualism. Science itself was changing and there were many different reactions to those changes, including both Mach's philosophies and modern spiritualism.

Within the scientific method, the repeatability of experiments for the verification of theories has been a primary element since the Scientific Revolution. In Mach's view, sensory elements which make up Natural Law must be common to all of mankind, and thus, experimentally repeatable. The very fact of repeatability was one of the major problems of scientific spiritualism. Psychical phenomena were not repeatable at the mere instigation of any scientist or observer. Nor were non-psychical spiritual phenomena repeatable. Whether or not a medium being tested was legitimate, *i.e.*, not a charlatan or fake trying to deceive the psychic investigators, if that medium was expected to show results but not capable of positive results at the particular time of a scientific experiment, there always existed the possibility that a genuine medium would fake the results to satisfy the investigating scientist. This one moment of deception was always a distinct possibility. There exist records of cases where people who were thought to be true mediums were caught cheating just once rendering their entire previous work suspect. The motto of the critics was once caught, always guilty. The opponents of spiritualism raised criticisms based on this possibility and this criticism did not go unrecognized by the proponents of spiritualism. According to C.C. Massey, who translated Zoellner's book to English,

The fact that he (Slade) cannot command these phenomena, at least the most striking of them, at will, points to conditions of their production varying with his own physical and mental states, and probably with those also of the person resorting to him. And this is the reason these

phenomena, though as capable of verification by scientific men and trained observers (by whom they in fact been repeatability verified) as by any one else, are not exactly suitable for scientific investigation. There is no clear distinction between the two things. Scientific verification supposes that the conditions of an experiment are ascertained, that they can be regularly provided, and the experiment repeated at pleasure.... Yet it is equally consistent with the medium's knowledge that the conditions (of which he is himself ignorant) cannot be controlled, and with his consequent failure and discredit. (Massey in Zoellner, p.15)

Massey ended this statement with a suggestion for science:

Systematic investigation of this subject by science is much to be desired, but it must not be undertaken in a magisterial spirit, with the imposition of a test, and the demand of an immediate result. The only claim which spiritualists make upon scientists is that they shall not, in entire ignorance and contempt of the evidence, sanction and encourage the public prejudice by their authority. (Massey in Zoellner, pp.15-16)

And then he offered an example in a footnote, as if it were an afterthought. "For example, by describing Spiritualism as 'a kind of intellectual whoredom.' - Professor Tyndall." (Zoellner, p.16) It seems that the scientists who investigated spiritual and related phenomena, being scientists, would take these factors into account. And, judging from their written experimental procedures they did so whenever possible.

Massey's suggestion for the 'systematic investigation of this subject by science' represented the same sentiment for which the Society of Psychical Research was established in 1882. According to Wallace,

So strong was the feeling against the paper ("On some Phenomena associated with Abnormal Conditions of the Mind" by W.F. Barrett) in official scientific circles at the time that even an abstract was refused publication in the *Report of the British Association*, and it was not until the Society for Psychical Research was founded that the paper was published, in the first volume of its *Proceedings*. It was the need of a scientific society to collect, sift and discuss and publish the evidence on behalf of such supernormal phenomena as Prof. Barrett described at the British Association that induced him to call a conference in London at the close of 1881, which led to the foundation of the Society for Psychical Research early in 1882. (Marchand, p.425)

It would seem from this that those scientists who "ran" the establishment or had convinced themselves that they alone were the arbiters of what constituted proper scientific research would 'a priori' discount spiritualistic phenomena. This is not to suppose that they did not believe in the spiritual world. They could deny the phenomena while still keeping intact personal beliefs of a separate spiritual (in a religious sense)

world. A similar conclusion can be drawn from an editor's note in an American magazine, *The Popular Science Monthly*. An anti-spiritualist article presented as an open letter had appeared in the August 1879 issue of the magazine. In another letter to the editor, A.L. Child of Nebraska suggested that the opposing views should also be published. The editor's reply was quite instructive in illustrating the "official" attitude on spiritualism.

We give the *pros* and *cons* of subjects that are within the legitimate sphere of science. We give the *pros* and *cons* of discussion only where imperfect knowledge leads to diverse views, and where both sides recognize the canons of evidence by which all science has been created. But, though admitting of controversy under this limitation, our journal is devoted to the interests of science, and it cannot be denied that we *are* partisans partisans of science generally. Our magazine was started expressly to represent this side of things, and we have no right to publish the other side - that is, anti-scientific papers; it would be a breach of contract with subscribers. (*Popular Science Monthly*, 1879, p.700)

Although he did continue to say that many spiritualist articles had been published in the magazine, but only when the phenomena were investigated by competent authorities, the greater part of spiritualism challenges the very essence of science and "between your spiritualism and my materialism there is a fundamental antagonism; your position is radically anti-scientific; and so let us keep clear of each other." (*Popular Science Monthly*, p.701) By qualifying which type of articles was to be published, the editor could censor any article with which he disagreed, whether scientific or not. It can be assumed from this and similar instances that the scientific establishment did not see spiritualism as legitimate in most cases. But it must also be noted that the establishment did not explicitly deny the scientific methods used in psychical research. Instead, spiritualism and psychical research were defined as anti-scientific on basic principles.

In those cases where trained scientists investigated psychic or spiritual phenomena, they tried to be as thorough and scientific as possible. While some individuals in the scientific and academic communities may have thought that such investigators were not conducting proper scientific investigations, they themselves thought they were following the proper tenets of science. According to William Crookes, a well known and respected physicist as well as a psychic investigator,

I am scarcely surprised when the objectors say that I have been deceived merely because they are unconvinced without personal investigation, since the same unscientific course of *a priori* argument has been opposed to all great discoveries. When I am told that what I describe cannot be explained in accordance with preconceived ideas of the laws of nature, the objector really begs the question at issue and resorts to a mode of reasoning which brings science to a standstill. The argument runs in a vicious circle: we must not assert a fact till we know what it is in accordance with the laws of nature, while our knowledge of the laws of nature must be based on an

extensive observation of facts. If a new fact seems to oppose what is called a law of nature, it does not prove the asserted fact to be false, but only that we have not yet ascertained all the laws of nature, or not learned them correctly. (Medhurst and Goldney, p.36)

In many senses, Crookes was correct. There was an 'a priori' prejudice on both sides of the issue. Many critics refused to even admit the possibility of psychic phenomena on philosophical grounds. Yet other scientists, such as Michael Faraday, were willing to investigate some of the purported phenomena. However, as was stated by the editor of the *Popular Science Monthly*, the main scientific argument against spiritualism was that it challenged the foundations of science itself and in so far as this was true, it was also true that this argument ran into a "vicious circle," as Crookes correctly pointed out. The editor's argument took it for granted that science had run its course and there was nothing new to be discovered which could eventually challenge the laws of nature as then known. This attitude was anti-scientific.

John Tyndall, an English scientist and popularizer of science for the common folk, agreed with the editor's appraisal, making essentially the same claim against the spiritualists that Crookes made against their critics.

The present promoters of spiritual phenomena divide themselves into two classes, one of which needs no demonstration, while the other is beyond the reach of proof. The victims like to believe, and they do not like to be undeceived. Science is perfectly powerless in the presence of this frame of mind... When science appeals to uniform experience the spiritualist will retort 'How do you know that a uniform experience will continue uniform? ... The drugged soul is beyond the reach of reason. It is in vain that impostors are exposed, and the special demon cast out. (Tyndall, pp.451-452)

Tyndall then updated this comment with a footnote in the final printed product.

Since the time when the foregoing remarks were written I have been more than once among the spirits, at their own invitation. They do not improve on acquaintance. Surely no baser delusion ever obtained the dominance over the weak mind of man. (Tyndall, p.452)

Tyndall not only agreed with the magazine's editor, but went a good deal further. His sarcastic wit betrayed his non-scientific subjectivity toward spiritualism and his argument that 'science is perfectly powerless' against spiritualism betrayed his resolution to ignore the possibility of new phenomena, a distinctly non-scientific close-mindedness, which, in effect, proved that he was judging spiritualism according to an *a priori* dogma of science. However, Tyndall cannot be held to blame for his shortcomings in investigating psychic phenomena by modern standards. Since psychology had not yet been developed, he could not have known that his own prejudice could have negatively affected the séances that he attended.

Tyndall's seems to be the very attitude that Crookes attacked in his statement that "the objector really begs the question at issue and resorts to a mode of reasoning which brings science to a standstill." Whether or not spiritualism has a place in the real physical world is not the question. At point, according to Crookes, was whether it was scientifically valid to investigate phenomena outside the realm of normal science as determined by the scientific establishment. If it is not valid to do so, then the scientific establishment becomes a static, dogmatic authority and fails to progress.

From this statement, it is clear that keeping an open mind and not limiting science to only those phenomena that tended to confirm what had already been established as Natural Law could be considered valid science. It is to this end that scientists investigating spiritualism were directed. They thought they were dealing with legitimate phenomena and thus doing proper science. They also tried as best they could to keep charlatanism to a minimum.

Regarding metaphysical speculation, claims that the spiritualists were subjecting their objectivity to preconceived, 'a priori' metaphysical systems which were counter to established Natural Laws, could be either true or untrue, but such changes can only be answered on a case by case basis by individual scientists. It was not necessary to blanket all of spiritualism with the same criticism. Then again, the same objection could be leveled against the anti-spiritualists, and was by Crookes. They were victims of their own metaphysical 'a priorism.' No scientist, nor any person at any level, works in an intellectual vacuum. Those scientists who became interested in either the possible existence of a spiritual world which was continuous with our physical world, as well as the further possibility of communication between these two worlds, or with 'psychic' phenomena which were unconnected with such a spiritual world, were merely seeking to answer ancient metaphysical paradoxes concerning the interactions of mind and matter in the terms of their own intellectual, cultural and scientific background.

CONCLUSION

During the latter years of the nineteenth century there occurred a confluence of intellectual, cultural and scientific notions, which gave rise to modern spiritualism. Several of these notions have been noted; Evolution, conservation laws in physics and chemistry, the 'Naturphilosophie' ideas of convertibility of forces and unity of nature, the Romantic notions of organic nature as opposed to a strictly mechanistic view of nature, the Principle of Continuity, the mind-matter paradox, aether theories, Riemannian (non-Euclidean) geometries and other geometries of hyperspace, as well as older forms of occultism and spiritualism. Among these notions, the Principle of Continuity has been identified as a "unit-idea" which has influenced the intellectual development of mankind since the early Greek era. But to a far greater extent, the rise of modern spiritualism was a continuation of scientific speculations on the interaction between mind and matter. When considered within this context, both the development of the scientific aspect of spiritualism and psychical research in the latter nineteenth century were valid scientific endeavors as well as integral parts of the overall development of science.

When continuity was applied to the mind-matter problem, it was postulated that there existed a continuity between mind and matter (in a Leibnizian manner) rather than a discontinuity (in a Cartesian sense). When this synthesis of ideas of continuity came into contact with evolutionary theory, it resulted in the scientific speculations on the possibility of life after death. Or, so some scholars and scientists thought, and these scientists considered a study of the phenomena of spiritualism a legitimate scientific endeavor. Life after death, or rather a continuation of some aspect of an immaterial aspect of human life associated with mind after the death of the physical body of matter, was called the spirit. It was further speculated that this spirit must exist somewhere after the death of the physical body, leading to the postulation of an unseen universe.

As an extension of our normally sensed universe, this unseen universe was associated with either the physical aether theories or hyper-dimensional Non-Euclidean spaces for the purposes of spiritualism through an analogy with its suspected characteristics. This scenario does not exhaust the possibilities for the rise of Modern Spiritualism, but offers a more comprehensive view than already offered. Podmore, for example, stated that

... the explanation of the facile acceptance and rapid spread of the new marvels is chiefly to be sought, as we have endeavored to indicate ... in the special conditions of the nation and the times; in the general diffusion of education combined with an absence of authoritative standards of thought and the want of critical thinking; in the democratic genius of the American people; in their liability to be carried away by various humanitarian enthusiasms; in the geographical conditions incident to a rapidly expanding civilization. But especially, as we have seen, this tendency to belief was fostered by the still recent growth of popular interest in Mesmerism and in the various theories of a physical effluence - odyle, etherium, or vital electricity - which were associated with it, and had already been employed to explain the manifestations of various "electric" girls and other impostors, as well as the probable innocent hallucinations of Reichenbach's sensitives. No doubt, too, the introduction throughout the continent of the electric telegraph, an invention still so recent that the popular mind had not become familiarized with it, and still regarded its operation with something like childlike wonder, helped to quicken expectation and generally to induce a mental condition favourable to belief in other phenomena, which after all were to the uninstructed not more mysterious. As we have seen, it was in electricity the Spiritualists sought the physical basis of their phenomena. (Podmore, p.287)

But Podmore sought the development of modern spiritualism in events rather than the confluence of more elusive thoughts, beliefs and attitudes. So the rendering of this reconstruction of intellectual development by Podmore raises several questions. Primarily, why did spiritualism develop precisely at this point of history and the corollary to this question, was the rise of modern spiritualism a specific part of the growth of science or an aberration of science? These questions could only be answered by a more

comprehensive study of the development and change in the fundamental worldview of science that leads us to the mind/matter dichotomy.

In her own study of the issues, Oppenheim recognized this need to look at more fundamental attitudes to explain spiritualism.

The attempt to enunciate those principles, to locate the common denominators of the universe, to find the ever-elusive "basic building block" or "ultimate substance" of nature - these aspirations inspired spiritualists and psychical researchers, just as they inspired scientists who criticized spiritualism and psychical research. The quest for a hidden pattern, a unifying framework, a fundamental theory, to bring together every diverse particle and force in the cosmos, was intrinsically the same, whether one stressed the links between heat, electricity, magnetism, and light, or looked for connections between the mind, spirit, and matter. The vision of a "new science," which a number of spiritualists shared, may have been incapable of realization, but the search for a *tertium quid* between spirit and matter, mind and body, still haunted scientific consciousness around the turn of the century. (Oppenheim pp.396-397)

But Oppenheim's analysis, although extensive and very thorough, did not ferret out the most fundamental attitudes and thoughts on the problem of mind and matter, but sought the easier solution to the rise of spiritualism in a search to resolve the conflict between science and Christianity. Oppenheim carefully analyzed and explained the interplay of ideas that answered the question of why spiritualism developed when it did, by noting the confluence of ideas that evolved into modern spiritualism. But since her analysis did not proceed far enough to uncover the depth of the relations of spirit to the mind/matter dichotomy, her analysis did not completely place spiritualism and psychical research within their correct cultural and scientific context. Yet her study did go further toward that goal than any other study to date.

As to the second question, the answer is no. Modern spiritualism and kindred studies were not an aberration of science, but rather a sign of the success and maturity of science. During the latter half of the nineteenth century, science in general and physics in particular had become so successful that an opportunity presented itself to finally answer the lingering questions regarding mind and matter. Spiritualism and psychical research were both attempts at the different levels of common science and academic science to deal with this problem. Psychology and psychiatry were alternative attempts to deal with the mind/matter dichotomy and both successfully evolved into their modern forms from their origins in the late nineteenth century.

Psychology developed from psychical research and other disciplines when the question of mind was completely separated from matter and thus taken out of the hands of philosophers and physicists and placed in the hands of biologists, physiologists and medical practitioners. Although these new demarcations of academic territory did not completely answer the questions and issues raised, they put off the inevitable clash of

mind versus matter to a higher level, at which modern science now comes within the disciplines of parapsychology and paraphysics. Mind and matter were not so easily divorced, but new definitions of mind and matter were needed before progress in restoring the dichotomy could be made.

In the sense that the scientists investigating spiritualism were, in their minds, doing legitimate science and reacting to the important philosophical questions of their time, the rise of modern spiritualism cannot be considered an aberration outside of the normal evolution of science. Non-mainstream areas of science such as modern spiritualism, parapsychology and paraphysics are not invalid because they are not at the forefront of scientific efforts. Nor can they be ignored in either modern science or the history of science or science would become incomplete. The questions concerning our world that were considered in modern spiritualism, basically dealing with the interrelationships of mind and matter, were also considered at the same time by other scholars in other contexts, i.e. Mach's philosophical views, the development of psychoanalysis (Freud) and the attempts at psychological reduction of mind to matter (Fechner's *Psychophysics*) to name a few. This wider context of the approaches to resolving the mind/matter question alone should adequately demonstrate the importance of scientific spiritualism and the 'psychic' movements to the overall body of science during the latter nineteenth century, even to the skeptics.

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