

Human Radiations

Over the years a number of ideas have been put forward based on the concept of radiations, or emanations, of biophysical forces from human beings. This concept, although generally disregarded by parapsychologists today, was once widely used to explain phenomena such as auras, ESP, healing, luminous effects, materializations, movement of objects, and many other events.^[1] Earlier assessments discussed ideas from antiquity and folklore;^[2] here the emphasis will be on the pre-1930s literatures of mesmerism, Spiritism and Spiritualism, and psychological research. The ideas found in the literature are not necessarily comparable: some represent concepts of universal or vital radiations, while others refer to bodily-based nervous forces or cerebral radiations. But all were used in one way or another to explain various psychic phenomena.

Animal Magnetism

In his book *Mémoire sur la Découverte du Magnétisme Animal*, the German physician Franz Anton Mesmer^[3] suggested propositions about a universal fluid he called animal magnetism, which he believed could bring about actions in both organic and non-organic matter.^[4] This putative force was the central concept of mesmerism, a movement which flourished between the eighteenth and nineteenth centuries, and even later. It was said to be not only in the human body but everywhere in nature, and was thought to have healing properties. It was polarized like magnets, could be reflected by mirrors, and communicated to animate and inanimate matter, sometimes via sound.

Mesmer and his followers used passes (and initially, magnets) to control animal magnetism to induce healing, trances, clairvoyance, and other phenomena. In the words of one follower: 'The magnetic fluid continuously escapes us: it forms an atmosphere around our body ... which ... does not act noticeably on individuals around us; but when our will pushes and directs, it moves with all the strength that we impart: it moves like light rays sent out by bodies ablaze'.^[5] Mesmer himself wrote:

As we cannot comprehend how a body can act upon another at a distance, without there being something to establish a communication between them, we suppose that a substance emanates from him who magnetizes, and is conveyed to the person magnetized, in the direction given it by the will. This substance, which sustains life in us, we call the magnetic fluid. The nature of this fluid is unknown; even its existence has not been demonstrated; but everything occurs as if it did exist, and that warrants us in admitting it ...^[6]

Some believed that animal magnetism was a nervous fluid intimately related to heat electricity and light.^[7] In fact, such ideas reinforced the notion of a universal force that could manifest in different forms. Petetin^[8] called the force 'animal electricity' and stated that it could bring in information into the nervous system without the use of the eyes and other sensory organs.

Many people wrote about the medical applications of mesmerism. One author stated:

That in the mesmeric trance the most severe and protracted surgical operations can be performed, without the patients being sensible of pain.

That spasms and nervous pains often disappear before the mesmeric trance.

That it gives us a complete command of the muscular system, and is therefore of great service in restoring contracted limbs.

That the chronic administration of Mesmerism often acts as a useful stimulant in functional debility of the nerves.^[9]

Many were the conditions treated with mesmeric procedures, as seen in the literature of the subject. ^[10] James Esdaile^[11], an English physician, reported on amputations performed under the mesmeric state and listed many medical conditions successfully treated with magnetism in his medical practice in India. Others referred to spasms, perspiration, insensibility, catalepsy and mental effects such as thought-transference, and ecstasy.^[12]

What was later referred to as telepathy was explained by Esdaile as follows. A fluid

is transmitted to the mesmerised person's brain through the medium of his nerves: and the consequence is, that the *thought-modified* nervous fluid of the active brain is both reflected and understood by the passive brain of the patient, exactly as the passive end of an electric telegraph records the impulses received from the active extremity of the battery ...^[13]

Many reports of clairvoyance and related phenomena were associated with magnetism. An example was physician's Joseph Haddock's observations of a young woman called Emma:

A print of a cat was selected, and put into a card box: she put the box over her head, felt it carefully ... and then ... she began, — 'It is a thing; it is a dark thing; it has four legs, a tail, a head, and two eyes; things round its mouth; and it sits by the fire, and says *mew*; and it's a cat'.^[14]

Many other somnambules, or trance subjects, became famous in the mesmeric literature, among them the French clairvoyant Alexis Didier.^[15]

One interesting phenomenon was the perception of the fluid by mesmerized individuals, for example:

I put the thumb of my right hand in opposition to the thumb of the left hand of my patient, and separated our two hands horizontally; she saw the fluid out of her thumb & mine; she distinguished very well the two fluids ...

Another example of the action of magnetism was its influence on the growth of plants. In one instance mesmerist JJ Ricard^[16] said he was able to revitalize shrub via magnetization, while others affected the growth of roses.^[17]

The mesmeric movement, and the idea of animal magnetism as a physical force, declined in the second half of the nineteenth century. The Scottish physician James Braid reconceptualized hypnosis as changes in the nervous, circulatory and other systems produced by fixed attention, working in concert with processes such as the suppression of breathing and bodily inactivity.^[18] As such ideas gained ground the concept of a magnetic force gradually fell out of favour, to the point that it was referred to by one writer as a 'physics of pure fantasy'.^[19] As seen in the work of Bertrand Méheust,^[20] magnetism became redefined in terms of physiological speculations, and as suggestion, to the point that Hippolyte Bernheim^[21], a French physician, neurologist and student of hypnosis, argued that it was just another example of the many wrong beliefs of humanity, along with magic, witchcraft and saints.

However, a neo-mesmeric movement continued during the last decades of the nineteenth century, and continued into the twentieth.^[22] This included the work of such individuals as Alexandre Baréty^[23] and Hector Durville,^[24] also Albert de Rochas,^[25] who wrote about the exteriorization of sensibility induced by magnetic passes. In his studies de Rochas used a sensitive individual (A) who could see such radiations around an hypnotized individual (B). In his words:

If I, as magnetizer, act on this layer in any way, B feels the same [sensation] as if I acted on his skin, and he does not sense anything or almost anything if I act in any other place than on the layer; he does not feel much if he is acted upon by a person who is not in rapport with the magnetizer.

If I continue magnetization, A. sees forming around B. a series of equidistant layers separated by a space from 6 to 7 centimeters [of width]... and B. does not feel touches, [or] prickings ... the sensibility diminishes proportionally to its distance from the body.^[26]

The Od Force

Baron Karl von Reichenbach was influenced by mesmerism in his ideas about a universal force he called Od.^[27] Od, Reichenbach thought, was produced by the human body, also by crystals, heat and other natural processes. He wrote:

I placed a specimen card of many metals before many high sensitives, who saw them all in the dark, some brighter, others darker. A glass case full of silver plate gradually grew to be full of fine fire. Coal, selenium, iodine and sulphur were all found to be luminous. The light was a phosphorescent glow, as though they were translucent ... Besides the glow, the sensitives saw above these substances, flame-like emanations, losing themselves in smoke ... and in the former as well as in the latter cases, these flames could be made to nicker and be blown away by the breath, and they in many cases, throw light on the fingers, in which the objects were held. The colors of different substances varied greatly, and this variation gave a good test of the correctness of the statements of the sensitives.^[28]

Reichenbach attributed various features to Od. It was polarized and 'capable of being either directly accumulated on, or transferred by distribution to other bodies ...'^[29] It could cause pleasurable sensations, sensations of cold or warmth, and negative feelings, anxiety and cramps.

In later years the concept of Od was used by many to explain some of the phenomena of Spiritualism, among them physical mediumship.^[30] In tests conducted by the [Society for Psychical Research](#)

three observers ... on distinct occasions were in some way immediately aware when an electro-magnet was secretly 'made' and 'unmade' under such precautions as were devised to suppress ordinary means of knowing and to exclude chance and deception; and identified such magnetizations with luminous appearances which as described agreed generally with the evidence recorded by Reichenbach.^[31]

Other experiments were unsuccessful, possibly because they were carried out with non-sensitive participants.^[32]

Physical Mediumship

The development of Spiritualism saw various approaches to explaining the phenomena. One was that physical phenomena such as raps, movement of objects, luminous effects and materializations, were produced by emanations of biophysical forces; these were thought to emanate mainly from the body of the medium, although some theories also implicated the sitters in the séance, and more rarely, the surrounding environment. Interestingly, while many agreed about the existence of some form of human radiation, there were disagreements about the intelligent principle behind it: discarnate spirits and the medium's (usually unconscious) mind.

An early speculation by Adin Ballou, an American social reformer, postulated an abundance of spiritual magnetism in mediums, dreamers and clairvoyants. This principle, which Ballou called 'spiricity', was the way by which 'spirits can exert their peculiar powers, and maintain some sort of communication with the persons and things immediately circumjacent'.^[33]

Among those who rejected spirit action were American theorists Asa Mahan^[34] and Edward C Rogers.^[35] Rogers postulated the exteriorization from the body of a nerve force which he believed accounted for physical phenomena in séances and for poltergeist disturbances. This could take place through unconscious guidance by a living agent or with no specific direction – basically an automatic process. He believed this force was the same as Reichenbach's Od, which also inspired other speculations.

Writing about table turning, Marc Thury,^[36] one-time professor at the University of Geneva, speculated about the 'psychode,' a substance that reacted to the intentions of the will, capable of being exteriorized and of causing physical actions. Thury^[37] wrote: 'We propose to name *ecten*ic (extension) state this particular state of the organism ... in which the soul can somehow extend the usual limits of its action; and *ecten*ic force that which develops in this state'.^[38]

In his books *Spiritualism Answered by Science*,^[39] and *What Am I?*^[40] Edward W Cox, a British lawyer, wrote about a 'psychic force' in the nervous systems of mediums. Cox stated:

The Psychic is a person in whom there is an abnormal capacity for dislocation in the normal relationship of Soul and body. In such a condition, the Soul (or Psychic) Force ceases to flow through its usual channels and therefore manifests itself without them, as does the magnetic force, in disturbing effects upon molecular structure. Psychic Force ... penetrates and permeates molecular matter; and ... neutralises in matter the force of gravity.^[41]

[William Crookes](#), an English chemist and physicist, adopted Cox's 'psychic force' concept to make sense of the phenomena he observed with medium [Daniel Home](#).^[42] He noticed that Home's power to affect instruments was variable and speculated that they were related to the medium's vitality. He wrote:

after witnessing the painful state of nervous and bodily prostration in which some of these experiments have left Mr. Home – after seeing him lying in an almost fainting condition on the floor, pale and speechless – I could scarcely doubt that the evolution of psychic force is accompanied by a corresponding drain on vital force.^[43]

Many speculations were proposed to explain materializations, among them 'invisible exudations from the human organisations' of mediums utilized by spiritual beings,^[44] and alternatively, 'united will-power' to 'attract and gather certain magnetic and material elements from the medium, the persons present, and the atmosphere ...'^[45]

Much was written about the idea of transformations of bodily forces to account for materializations, for instance:

The law of conservation of energy points out that power cannot be gained in one direction without being lost in another, consequently the power which moves a visible or invisible spirit hand must come from somewhere, and on the hypothesis laid down in this sketch the power comes from the medium. On the withdrawal of much vital force from the whole or a particular part of the body of the medium, it would seem that of necessity that there must be a loss of heat to that part; such is actually the case in practice, for at all, or nearly all, materialisation *seances* for full forms, the medium becomes cold shortly before the manifestations begin ...^[46]

The French codifier of Spiritism [Allan Kardec](#) (pseudonym of Léon Hippolyte Denizard Rivail), popularized the concept of the ‘perispirit’, which he conceived as a ‘fluidic’ semi-physical envelope connecting the soul and the body, the principle spirits used to cause physical manifestations in mediumship.^[47] A vital force emanating from mediums bodies was postulated by Alexandre Aksakof, one-time imperial adviser to the Russian czar, whose ideas concerning materialization phenomena were influential.^[48] [Edouard von Hartmann](#),^[49] a German philosopher, postulated a nerve force emanating from mediums and sitters – unconsciously guided by the medium – that could move objects and produce other physical phenomena.

Ideas of this sort also appeared in the twentieth century, and are still with us today. Speculations in the literature refer to ‘an invisible prolongation of the organism of the medium’,^[50] the ‘disaggregation (probably atomic) of the medium’s organic substance’,^[51] and ‘energetic psychophysical emanations’.^[52] The emanations of so-called ectoplasm, as studied by individuals such as mechanical engineer [William J Crawford](#)^[53] and physician Albert von Schrenck-Notzing,^[54] were considered part of this. This was all summarized by French psychical researcher [René Sudre](#)^[55] in his textbook *Introduction à la Métapsychique Humaine*, in which he referred to a ‘psychic fluid’ emanating from the human body to produce all kinds of physical manifestations.

ESP

Vital forces or electrical-type emanations have been used to interpret forms of ESP, mainly telepathy, as with brain waves in the early nineteenth century ideas of brain waves. For example,

Let it be granted that whensoever any action takes place in the brain... an atomic movement occurs ... Let it also be granted that there is ... [an] ‘Ether’ ... But if these two assumptions be granted ... should it not follow that no brain action can take place without creating a wave or undulation ... in the ether ... Each acting, thinking brain then would become a centre of undulations transmitted from it in all directions through space ... with the varying nature and force of brain actions ...^[56]

Mark Twain wrote about ‘mental telegraphy’, and speculated on the action of a ‘finer and subtler form of electricity.’^[57] Crookes hypothesized that ‘electrical rays of wavelengths hitherto undetected by instrumental means’ could perhaps emanate from the brain.^[58] Similarly, Edwin J Houston, an American electrical engineer, argued that ‘cerebral energy ... is dissipated by imparting wave motions to the surrounding ether, and such waves are sent out in all directions from the brain’.^[59]

A later writer speculated on the existence of ‘psychic waves, like hertzian waves in wireless telegraphy, [which] propagate at a distance ...’^[60] This brings to mind such analogies to radio as that of [Upton Sinclair’s *Mental Radio*](#).^[61] Ferdinando Cazzamalli,^[62] an Italian researcher, concluded after many experiments that: ‘The human subject, under particular psychic conditions ... gives off electromagnetic oscillations of the type of radio waves’.^[63] [William Barrett](#), a British physicist and psychical researcher, wrote that ‘just as a vibrating tuning fork or string spends its energy most swiftly when it is exciting another similar fork or string in unison with itself, so the activity of the brain may be more speedily exhausted by the presence of other brains capable of sympathetic vibration with itself’.^[64]

Detectors

In his 1939 book *Laboratory Investigations into Psychic Phenomena*, Hereward Carrington gave a long list of instruments used to detect human radiations. These typically used a needle or other indicator to show the action of a force emanating from the human body, such as Hippolyte Baraduc’s biometer.^[65] An influential example was Paul Joire’s sthenometer,^[66] supposed to detect a nervous

force via a movement of a needle under glass when a hand was brought close to it. Joire reported larger movements of the needle with the right hand as compared to the left. Some conditions had specific patterns, such as low level movements in the case of hysterics.^[67] Critics argued that that the movements of the needle, with the sthenometer and with other instruments, could be caused by heat emanating from the hand.^[68]

Baraduc, a French physician and psychical researcher, used photographic plates to capture bodily vital radiations, holding that unexplained patterns showed different types of emanations and indicated bodily and mental states of health.

Other experimenters used photographic plates to capture invisible 'fluids'. One example was the 'effluviographs' of Louis Darget,^[69] photographs of hands, plants and other objects, taken without exposure to light, that showed fields around them. Darget claimed that effluviographs could reflect the health of individuals and could even capture a person's thoughts. In one instance he placed a plate by the head of his sleeping wife and obtained what looked like an eagle, claiming it could have been the result of a dream (his wife recalled no such thing, however).

Critiques and Non-physical Perspectives

Many critiques were offered of these ideas. As summarized by Bertrand Méheust^[70] in the case of France, the concept of animal magnetism was replaced as an explanation of the phenomena of mesmerism by physiological and psychological alternatives such as suggestion. Other critics argued there was no evidence for the existence of such radiations, and that in some cases artifacts or conventional explanations, such as the effect of bodily heat on instruments and photographic plates,^[71] could account for the results.

In 1903 Prosper-René Blondlot, a French physicist, announced his discovery of N-rays, which he claimed emanated from humans and objects. The finding was controversial, as leading physicists were unable to replicate it, and the the following year it was [proved to have been illusory](#).

In some cases, resistance to transmission models of ESP were based on the belief in more mentalistic or nonphysical conceptions, as seen in *Phantasms of the Living*, the 1886 survey and analysis of spontaneous psychic phenomena published by researchers of the Society for Psychical Research.^[72] Others such as biologist Hans Driesch postulated a sort of a mental field consisting of 'something superpersonal in addition to something non-spatial in general'.^[73]

In later years the work of JB Rhine and his associates led to a diminished interest among parapsychologists in human radiations as an explanation of psychic phenomena:

The new experimental parapsychology (or at least some of its representatives) claimed that time, space and the physical characteristics of the target were irrelevant to ESP and PK [psychokinesis] test performance ... The mind was clearly the causative agent underlying psychic phenomena and no consideration for fluids or electromagnetic forces of any kind was deemed necessary ...^[74]

With some exceptions, physicalistic transmission ideas as explanations for ESP and other psychic phenomena have fallen out of favor, and their discussion is limited mainly to popular and occult forums.

Carlos S Alvarado

Literature

The literature on these topics has been widely reviewed. Useful overviews are the writings of Alvarado (2006), Amadou (1953), Carrington (n.d.), Pascal (1936), and Ungaro (1992). The concept of animal magnetism has been discussed repeatedly: two good overviews are the books of Crabtree (1993) and Gauld (1992). Both Crabtree (1993) and Podmore (1902) touch on Spiritualism and Spiritism. For different forms of photography see Chéroux et al (2004) and Krauss (1995). Several articles discuss the ideas of individuals: Edwin J Houston (Alvarado, 2015), Albert de Rochas (Alvarado, 2016), Hereward Carrington (Alvarado & Nahm, 2011), and Karl von Reichenbach (Nahm, 2012).

Aksakof, A. (1898). *A Case of Partial Dematerialization of the Body of the Medium: Investigation and discussion*. Boston: Banner of Light.

Alvarado, C. S. (2006). Human radiations: Concepts of force in mesmerism, spiritualism and psychical research. *Journal of the Society for Psychical Research* 70, 138–62.

Alvarado, C. S. (2009). Late nineteenth and early twentieth century discussions of animal magnetism. *International Journal of Clinical and Experimental Hypnosis* 57, 366-81.

Alvarado, C.S. (2013). The influence of Reichenbach's concept of Od. *Journal of Scientific Exploration* 27, 111-15.

Alvarado, C.S. (2015). Telepathic emissions: Edwin J. Houston on 'Cerebral Radiation.' *Journal of Scientific Exploration* 29, 467-90.

Alvarado, C.S. (2016). On psychic forces and doubles: The case of Albert de Rochas. *Journal of Scientific Exploration* 30, 63-84.

Alvarado, C.S. & Nahm, M. (2011). Psychic phenomena and the vital force: Hereward Carrington on 'Vital Energy and Psychical Phenomena.' *Journal of the Society for Psychical Research* 75, 91-103.

Amadou, R. (1953). Esquisse d'une histoire philosophique du fluide. *Revue Métapsychique* 21, 5-33.

Anonymous (probably William Harrison) (1875). Speculations relating to new facts in Spiritualism. *Spiritualist Newspaper*, March 19, 133-35.

Ashburner, J. (1867). *Notes and Studies in the Philosophy of Animal Magnetism and Spiritualism: With observations upon catarrh, bronchitis, rheumatism, gout, scrofula, and cognate diseases*. London: H. Baillière.

Ballou, A. (1852). *An Exposition of Views Respecting the Principal Facts, Causes and Peculiarities involved in Spirit Manifestations*. Boston: Bela Marsh.

Baraduc, H. (1893). *La Force Vitale: Notre corps vital fluidique, sa formule biométrique*. Paris: G. Carré.

Baraduc, H. (1896). *L'Ame Humaine: Ses mouvements, ses lumières et l'iconographie de l'invisible fluidique*. Paris: Georges Carré.

Baréty, A. (1887). *Le Magnétisme Animal: Étudié sous le nom de force neurique rayonnante et circulante dans ces propriétés physiques, physiologiques et thérapeutique*. Paris: Octave Doin.

Barrett, W.F. (1882). Appendix to the report on thought-reading. *Proceedings of the Society for Psychical Research* 1, 47–64.

Barrett, W.F., Close, M.H., Lane-Fox, G., Gurney, E., (1883). Myers, F.W.H., Myers, A.T., Pease, E.R., Ridley, H.N., Stone, W.H., & Coffin, W.H. (1883). First report of the 'Reichenbach' committee.

Proceedings of the Society for Psychical Research 1, 230-37.

Barth, G. (1853). *What is Mesmerism? The question answered by a mesmeric practitioner, or mesmerism not miracle*. London: H. Baillière.

Bernheim, H. (1891). *Hypnotisme, Suggestion, Psychothérapie: Études nouvelles*. Paris: Octave Doin.

Braid, J. (1843). *Neurypnology or the Rationale of Nervous Sleep considered in Relation with Animal Magnetism*. London: John Murray.

Carrington, H. (n.d.). *Laboratory Investigations into Psychic Phenomena*. London: Rider.

Cazzamalli, F. (1926). Telepsychic phenomena and cerebral radiations. *Journal of the American Society for Psychical Research* 20, 1-17.

Charpignon, [L.J.]. (1851). *Physiologie, Médecine et Métaphysique du Magnétisme*. Brussels: Société Typographique Belge.

Chéroux, C., Fischer, A., Apraxine, P., Canguilhem, D., & Schmit, S. (2004). *The Perfect Medium: Photography and the occult*. New Haven: Yale University Press.

Cox, E.W. (1872). *Spiritualism Answered by Science: With the proofs of a psychic force* (new revised edition). London: Longman.

Cox, E.W. (1874). *What Am I?: A popular introduction to mental physiology and psychology: Vol. II.: The mechanism in action*. London: Longmans.

Crabtree, A. (1993). *From Mesmer to Freud: Magnetic sleep and the roots of psychological healing*. New Haven, CT: Yale University Press.

Crawford, W.J. (1921). *The Psychic Structures at the Goligher Circle*. New York: E.P. Dutton.

Crookes, W. (1874). *Researches in the Phenomena of Spiritualism*. London: J. Burns.

Crookes, W. (1892). Some possibilities of electricity. *Little's Living Age* 78(s.5), 93-97.

Crowell, E. (1879). *The Spirit World: Its unhabitants, nature, and philosophy*. Boston: Colby & Rich.

Deleuze, J.P.F. (1813). *Histoire Critique du Magnétisme Animal* (Vol. 1). Paris: Mame.

Deleuze, J.P.F. (1852). *Practical Instruction in Animal Magnetism* (4th ed.). London: Hippolyte Baillière.

Denis, L. (1900). Psychologie expérimentale: Phénomènes d'extériorisation et de dédoublement. *Annales des Sciences Psychiques* 10, 291-94.

de Rochas, A. (1899). *L'Extériorisation de la Sensibilité: Étude expérimentale & historique*. Paris: Chamuel.

Driesch, H. (1933). *Psychical Research: The science of the super-normal*. London: G. Bell. (First published in German, 1932)

Durville, H. (1895-1896). *Traité Expérimentale de Magnétisme* (2 vols.). Paris: Librairie du Magnétisme.

Elliotson, J. (1849). Clairvoyance of Alexis Didier. *Zoist* 6, 417-20.

- Esdaile, J. (1846). *Mesmerism in India, and its Practical Application in Surgery and Medicine*. London: Longman, Brown, Green, and Longmans.
- Esdaile, J. (1852). *Natural and Mesmeric Clairvoyance, with the Practical Application of Mesmerism in Surgery and Medicine*. London: Hippolyte Bailliere.
- Flammarion, C. (1907). *Mysterious Psychic Forces: An account of the author's investigations in psychical research, together with those of other european savants*. Boston: Small, Maynard.
- Gauld, A. (1992). *A History of Hypnotism*. Cambridge: Cambridge University Press.
- Gurney, E., Myers, F.W.H. & Podmore, F. (1886). *Phantasms of the Living* (2 vols.). London: Trübner.
- Haddock, J. W. (1851). *Somnolism & Psycheism* (2nd ed.). London: James S. Hodson.
- Houston, J. (1892). Cerebral radiations. *Journal of the Franklin Institute* 133, 488–97.
- Jastrow, J. & Nuttall, G.F.H. (1886). On the existence of a magnetic sense. *Proceedings of the American Society for Psychical Research* 1, 116-26.
- Joire, P. (1904). Etude d'une force exteriorisés por l'organisme vivant, et observations faites au moyen du sthénomètre. *Annales des Sciences Psychiques* 14, 242-53.
- Joire, P. (1905). Modifications in the nervous force externalised, according to the state of health of the subjects. *Annals of Psychical Science* 2, 219-34.
- Kardec, A. (1862). *Spiritisme Expérimental: Le livre des médiums* (3rd ed.). Paris: Didier.
- Knowles, J.T. (1869). Brain-waves—A theory. *The Spectator* 42, 135–37.
- Krauss R.H. (1995). *Beyond Light and Shadow: The role of photography in certain paranormal phenomena: An historical survey*. Munich: Nazraeil Press.
- Lafontaine, C. (1852). *L'Art de Magnétiser ou le magnétisme animal* (2nd ed.). Paris: Germer Baillière.
- Mackenzie, W. (1923). *Metapsichica Moderna: Fenomeni medianici e problemi del subcosciente*. Rome: Librerie di Scienze e Lettere.
- Mahan, A. (1855). *Modern Mysteries Explained and Exposed in four parts*. Boston: J.P. Jewett.
- Maury, L.F.A. (1865). *Le Somneil et les Rêves: Études psychologiques sur ces phénomènes et les divers états qui s'y rattachent* (3rd ed.). Paris: Didier.
- Méheust, B. (1999). *Somnambulisme et Mediumnité (1784–1930): Vol. 1.: Le défi du magnétisme animal*. Le Plessis-Robinson, France: Institut Synthélabo pour de Progrès de la Connaissance.
- Mesmer, F.A. (1779). *Mémoire sur la Découverte du Magnétisme Animal*. Paris: Didot.
- Nahm, M. (2012). The sorcerer of Cobenzl and his legacy: The life of Baron Karl Ludwig von Reichenbach, his work and its aftermath. *Journal of Scientific Exploration* 26, 381-407.
- Owen, R.D. (1871). *The Debatable Land between this World and the Next*. London: Trubner.
- Pascal, E. (1936). La question du 'fluide magnétique.' *Revue Métapsychique* 5, 375-417.
- Petetin, J.H.D. (1808). *Électricité Animale* (2nd ed.). Paris: Brunot-Labbé.

- Picard, Dr (1845). Application du magnétisme aux végétaux. *Journal du Magnétisme* 1, 477-80.
- Podmore, F. (1902). *Modern Spiritualism: A history and a criticism* (2 vols.). London: Methuen.
- Reichenbach, C. von. (1851). *Physico-physiological Researches on the Dynamics of Magnetism, Electricity, Heat, Light, Crystallization, and Chemism, in their Relation to Vital Force* (from German 2nd ed). New York: J.S. Redfield (First published in German, 1849)
- Reichenbach, Baron. (1860). *Odic-magnetic Letters*. New York: Calvin Blanchard.
- Ricard, J.J.A. (1841). *Traité Théorique et Pratique du Magnétisme Animal ou Méthode Facile pour Apprendre a Magnetiser*. Paris: Germer Baillière.
- Rogers, E.C. (1853). *Philosophy of Mysterious Agents, Human and Mundane or the Dynamic Laws and Relations of Man*. Boston: J.P. Jewett.
- Schrenck-Notzing, A.F. (1920). *Phenomena of Materialisation: A contribution to the investigation of mediumistic teleplastics* (rev. ed.). London: Paul Trench, Trubner.
- Schrenck-Notzing, A.F. (1925). *Les Phénomènes Physiques de la Médiumnité*. Paris: Payot.
- Sinclair, U. (1930). *Mental Radio*. Pasadena, CA: Author.
- Stratton, J.M. & Phillips, P. (1906). Some experiments with the sthenometer. *Journal of the Society for Psychical Research* 12, 335-39.
- Sudre, R. (1926). *Introduction à la Métapsychique Humaine*. Paris: Payot.
- Tardy de Montravel, A.A. (1785). *Essai sur la Théorie du Somnambulisme Magnétique*. London: N.p.
- Tégrad, D.L. (1902). Photographie des radiations magnético-psychiques. In *Compte rendu du Congrès Spirite et Spiritualiste International tenu a Paris du 16 au 27 Septembre 1900* (592-95). Paris: Société d Étude des Phénomènes Psychiques.
- Thury, M. (1855). *Les Tables Tournantes considérés au point de vue de la Question de physique Ggénérale qui s'y rattache, le livre de M. le Comte A. de Gasparin et les Expériences de Valleyres*. Geneva: J. Kessman.
- Twain, M. (1891). Mental telegraphy: A manuscript with a history. *Harper's New Monthly Magazine* 84, 95-104.
- Ungaro, J. (1992). *Las Radiaciones Humanas: Historia de la radiónica*. Buenos Aires: Club de Estudio.
- Von Hartmann, E. (1885). *Spiritism*. London: Psychological Press.

Endnotes

Footnotes

- 1.^ Alvarado (2006); Ungaro (1992).
- 2.^ Amadou (1953).
- 3.^ Crabtree (1993); Gauld (1992).
- 4.^ Mesmer (1779).
- 5.^ Deleuze (1813), 89.
- 6.^ Deleuze (1852), 1-2.

7. ^ Charpignon (1851).
8. ^ Petetin (1808).
9. ^ Esdaile (1846), 271.
10. ^ Ashburner (1867), chapter 11; Barth (1853), 119-49.
11. ^ Esdaile (1846).
12. ^ Lafontaine (1852).
13. ^ Esdaile (1852), 238.
14. ^ Haddock (1851), 101.
15. ^ Elliotson (1843).
16. ^ Ricard (1841), 334.
17. ^ Picard (1845).
18. ^ Braid (1845).
19. ^ Maury (1865), 277.
20. ^ Méheust (1999).
21. ^ Bernheim (1891).
22. ^ Alvarado (2009).
23. ^ Baréty (1887).
24. ^ Durville (1895-96).
25. ^ de Rochas (1899).
26. ^ de Rochas (1899), 56.
27. ^ Reichenbach (1849/1851).
28. ^ Reichenbach (1860), 57.
29. ^ Reichenbach (1849/1851), 116.
30. ^ Alvarado (2013).
31. ^ Barrett et al (1883), 236.
32. ^ Jastrow & Nuttall (1886).
33. ^ Ballou (1852), 13.
34. ^ Mahan (1855).
35. ^ Rogers (1853).
36. ^ Thury (1855).
37. ^ Thury (1855).
38. ^ Thury (1855), 45.
39. ^ Cox (1872).
40. ^ Cox (1874).
41. ^ Cox (1874), 417-18.
42. ^ Crookes (1874).
43. ^ Crookes (1874), 41.
44. ^ Owen (1871), 404.
45. ^ Crowell (1879), 181-82.
46. ^ Anon. (1875), 135.
47. ^ Kardec (1862).
48. ^ Aksakof (1898).
49. ^ von Hartmann (1885).
50. ^ Flammarion (1907), 423.
51. ^ Mackenzie (1923), 252.
52. ^ Schrenck-Notzing (1925), 63.
53. ^ Crawford (1921).
54. ^ Schrenck-Notzing (1920).
55. ^ Sudre (1926).
56. ^ Knowles (1869), 136.
57. ^ Twain (1891), 101.

- 58.^ Crookes (1892), 95.
- 59.^ Houston (1892), 490.
- 60.^ Denis (1900), 291.
- 61.^ Sinclair (1930).
- 62.^ Cazzamalli (1925/26).
- 63.^ Cazzamalli (1925/26), 16.
- 64.^ Barret (1882), 62.
- 65.^ Baraduc (1893).
- 66.^ Joire (1904).
- 67.^ Joire (1905).
- 68.^ Stratton and Philips (1906).
- 69.^ Tégrad (1902).
- 70.^ Méheust (1999).
- 71.^ Pascal (1936).
- 72.^ Gurney, Myers, and Podmore (1886).
- 73.^ Driesch (1932/33), 133.
- 74.^ Alvarado (2006), 151.