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The Case and the Canon

Anomalies, discontinuities, metaphors between
science and literature

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Mesmerism: from an ambiguous physical and medical canon to psychology

Surprisingly, if you check on the Internet the name of Mesmer, you can find a huge number of dedicated sites, far more than you could have naively expected, considering that his ideas are today thought of as pseudoscientific, and his therapeutic practice is almost obsolete.

The continuing interest in Mesmer, more than for the intrinsic scientific value of his ideas, according to some authors¹ resides mainly in his pivotal position in the history of Medicine and Psychology on the one hand, and, on the other, the fact that he started a complex and diversified movement, often referred to as “Mesmerism”, which spread all over the world throughout the Nineteenth century, influencing many different fields, even outside medicine and psychology, like literature, philosophy and politics.

Mesmer was often judged, and still is, either as a charlatan or as a misunderstood genius, due to the intrinsic ambiguity of his medical practice and his theory in the context of current science. Quoting from Tatar “the mesmeric practice finds its place in the middle of the spectrum where primitive rites shade off into hypnosis and psychoanalysis, faith healing merges with Christian Science, and ancient superstition blends with spiritualism and parapsychology”.²

Born in the small village of Iznang, north of Lake Costance in 1734, his unusual life has been a subject of various books and biographies³, despite the scarcity of primary sources, and thus we will start here to recall the most important steps of his career. He studied first Theology and then Medicine at Vienna University, discussing a thesis, in 1766, entitled *De Planetarum influxu in corpus humanum*, inspired by a book of Richard Mead *The imperio solis ac lunae* (an updating of ancient astrology, in the name of the Newtonian theory of

1 See R. Darnton, *Mesmerism and the End of the Enlightenment in France*; A. Crabtree, *From Mesmer to Freud. Magnetic sleep and the roots of psychological healing*.

2 M.M. Tatar, *Spellbound: Studies on Mesmerism and Literature* (Princeton: Princeton Univ. Press, 1978).

3 See R. Tischner, *Franz Anton Mesmer, Leben*; J. Thuilier, *Franz Anton Mesmer ou l'Extase magnétique*; S. Zweig, *Die Heilung durch den Geist. Mesmer, Mary Barker-Eddy, Freud*.

gravity), in which he proposes the hypothesis of a form of “Animal Gravity” which acts through a pervasive fluid that animates matter and human beings (Fig.1).



Figure 1. Portrait of Mesmer in the centre surrounded by Newton (upper left), Paracelsus (upper right) and R. Mead (down left). In the right the first page of Mesmer's thesis.

Later on in Vienna he met an Astronomer, father Hell, who became popular using magnets to cure various ailments and, under his influence, decided to change the name of “animal gravity” into “animal magnetism”, mediated by a “magnetic fluid”, even if he soon realized that magnets were not essential for the cure and he started to distinguish animal magnetism from the mineral magnetism. How does this hypothetical magnetic fluid work? Mesmer was always convinced that the therapeutic efficacy of his medical practice depended on the existence of a universal fluid permeating all bodies whose continuous ebb and flux could affect the body machine. The harmonic flux was a sign of health, the engorgement of it was at the basis of any ailment. The task of the magnetizer was simply to restore the correct flux and thus the harmony in the body.

Mesmer started to humbly practise Medicine in Vienna, but his life substantially changed when he married a rich widow. His elegant house became a meeting place for scientists and artists, especially musicians, including Mozart, Haydn and Gluck. He was a great amateur musician and a good player, and one of

the sponsors of the young Mozart: in his garden he housed the first performance of the opera *Bastian und Bastianne* by the twelve-year-old Mozart, who will later remember his friendship with Mesmer ironically mentioning the “*pietra mesmerica*” at the end of the first act of “*Cosí fan tutte*”. This favorable position in Vienna, also supported by his Masonic friends, allowed him to dedicate himself to his preferred studies, and he started applying his ideas about the magnetic fluid to the cure of patients. His fortune and fame came to an end following a scandal, probably mounted by envious colleagues, regarding one of his patients, Maria Therèse Paradies, a blind young girl, excellent piano player, who claimed to have recovered from her blindness through Mesmer’s cure. The case forced Mesmer to leave Vienna for Paris, which was supposed to be a place more open to novelties.

Coming back to his ideas about “animal magnetism” in the 2nd memoir of 1799⁴, Mesmer tries to conceptualize his medical practice by proposing a sort of general physical principle on which to justify his therapeutic methods. This is a good example of pseudo-science: a sort of general theory, strictly materialistic, based on a vague, imprecise and omnicomprehensive physical concept consisting of atomistic natural philosophy blended with a fluidistic theory of matter and gravity. In other words, a materialistic cosmology, generic and qualitative, capable of explaining everything. The most pseudoscientific aspect was the fact that the existence of the alleged magnetic fluid was only based on the effects on the patients: in other words, the existence of a physical entity inferred not from instrumental measurements and/or quantitative considerations, but by the psychophysical reaction of a living body.

According to Mesmer, one of the most appealing features of his theory was the reduction of all illnesses to a unique cause. Following this concepts, probably along an evolution difficult to reconstruct, he designed a medical practice, basically consisting of touching the patient in the critical regions according to the different ailments, and passing the hands along the body by the so called “mesmeric passes”, often deeply looking at his eyes. Then, he improved this basic technique by adding musical sounds, produced by a violin or a glass-harmonica (a curious instrument made up of many glasses), in a sort of musical therapy. Moreover, the therapeutic séances were held in a highly suggestive environment: the walls of the room were covered by curtains bearing astrological symbols and by large mirrors (the fluid was supposed to reflect like the light), while Mesmer often entered the room dressing in a long pink gown and holding in his hand a cylindrical or conical rod very similar to a “magic wand”, which was supposed to efficiently transfer the magnetic fluid to the patient’s body. When the number of patients began to grow he invented other indirect

4 See F.A. Mesmer, *Le magnétisme animal e Magnétisme animal- Mémoires et aphorisme*.

methods, by accumulating, according to his delusionary ideas, the magnetic fluid within the “baquet” (Fig. 2), a sort of tank containing “magnetized water”, bottles, iron powder and bent metallic rods protruding from the cover of the tank, which the body of the patients approached in order to receive the fluid, even without the continuous presence of the magnetizer. For this purpose Mesmer also started to magnetize trees to allow the delivery of fluid to the patients through a system of ropes attached to the tree.



Figure 2. Left : a mesmerizer inducing a magnetic trance, engraving after Dodd, 1794. Plate from Ebenezer Sibly's. Right: the only example of baquet still existing in the world (Lyon).

The reaction of the patients was quite often surprisingly strong, occasionally culminating in a sort “crisis” (“mesmeric crisis”), often of convulsionary nature, very similar to epileptic or hysterical crises, recalling also the convulsionary behavior of the so called possessed of the tradition of exorcism; Mesmer believed that these crises were a necessary step for the recovery. Of course, especially in Paris, these crises often occurred in young girls, raising a suspicion of a sexual reaction, a sort of orgasm ‘sui generis’.

It is clear that Mesmer in some way channeled his therapeutic practice into a sort of magic and suggestive rite, that probably, together with his charismatic personality, induced these “éclatant” reactions in the patients. In such a rite Mesmer was probably inspired by some aspects of Masonic rites, but the strange thing is, that he always justified such methods by his scientifically ambiguous physical interpretation. He often insisted, as a true follower of the Enlightenment, that his theory and practice was strictly scientific, placing in a new perspective what was previously considered as magic, religious or a product of superstition. On this basis Mesmer interpreted the spectacular therapeutic effects of his contemporary the famous exorcist, father Johan Joseph Gassner.

Even considering that in the age of Mesmer the use of hypothetical fluids (think, for instance, of ether and flogisto) to explain physical processes was still alive, it is hardly believable how his pseudophilosophical and pseudoscientific theory could be considered by him as the basis of the interpretation of his “suggestive” practice and, at the same time, how insistently he tried to receive the endorsement of official Science. But, incidentally, if we are too surprised of this, it is wise to recall that still today a large number of people are prone to accept pseudoscientific entities like bioenergy, prana, orgonic energy etc., conceptually equivalent to the mesmerian “magnetic fluid”, together with the associated alternative therapies (this of course does not exclude that some of them may be occasionally useful or effective when properly applied).

As a matter of fact, this therapeutic practice, though inspired and/or justified by an ambiguous conceptual frame (we can think of it as a Mesmer’ Canon, like the concept of “animal magnetism” and “magnetic fluid”), turned out to have an unexpected though controversial efficacy, at least for a certain number of ailments.

A posteriori, after two centuries, it is difficult to establish the quality and the extent of this efficacy. At first glance the incredible success in curing various illnesses appears more similar to a thaumaturgic power than a normal medical success. Unfortunately, a strict technical analysis of such therapeutic success is probably a difficult, if not impossible task, due to the ambiguous and obsolete classification of the ailments of Mesmer’s time. What certainly appears is that the greatest efficacy of such therapeutic methods mainly regarded nervous and psychological syndromes, as Mesmer himself often recognized.

It is worth noting that in the time of Mesmer, psycho-neurological disorders were a critical issue for the medical practice, fluctuating between something of metaphysical (“maladies de l’âme”) and physical, often classified as “moral illnesses” and, as such, more pertinent to the action of a faith healer or a priest than of a doctor. This is also connected to the philosophical problem of the distinction between body and mind or soul which, paradoxically, was in some way taken to the extreme in the modern era, through the Cartesian dualistic view of the human being: on one hand the soul and on the other the body. The priest cures the soul and the doctor the body.

This idea permeates the very beginning of the new medicine; this sort of machine-body perspective leading to a sort of “cadaverization” of the patient was very vivid in Mesmer’s time; while medical language was made up of terms like iatro-mechanical, iatro-chemical, etc. trying to conform to the new conception of natural philosophy, medical practice continued to be very crude and primitive and remedies like vesicants, bleedings, clysters etc. were the usual tools of doctors and practitioners, while charlatans proposing improbable panaceas,

faith healers and other “border-line” figures were still very popular mainly in the poor classes.

It is against this background that we must judge Mesmer’s activity. His method had the advantage of being soft and almost without secondary effects. In Paris he became very popular both in the upper classes, including very influential aristocrats and members of the royal court, and in the poor or lower class population, often treated free of charge. Thus, the poor people were gratified by the democratic generous attitude of Mesmer, whereas the upper classes, especially their female representatives, often affected by melancholia or simply bored to death due to their rich but meaningless life, and often prey to hysterical syndromes like the famous “vapeurs”, were delighted by the magic and mysterious atmosphere of the mesmeric séances, independently from their high costs.

A true fanaticism for mesmeric cures spread throughout Paris and everyone was involved in discussions concerning the marvelous powers of this therapy. But Mesmer insisted that his therapy should be officially recognized by doctors and scientists. At last, in 1784 a Committee was nominated by Louis XVI, composed of distinguished scientists, including Lavoisier under the responsibility of B. Franklin. This achievement was partially due to a fellow of Mesmer, Deslon, who was a distinguished doctor, and a great esteemer of Mesmer. The members of the Committee performed a series of tests, also performing a typical blind experimentation: for example a young boy, who had proved very sensitive to the magnetic fluid, was invited to approach a mesmerized tree and he reacted, while remained totally unresponsive to a tree previously magnetized according to the prescriptions of Deslon.

The conclusion of the final report is summarized by the following sentence “the fluid without imagination is powerless, whereas the imagination without fluid can produce the effect of the fluid”.

The action of the hypothetical magnetic fluid was interpreted as due to “imagination” and “imitation”, which can be translated into current language as “suggestion” and “collective or imitative suggestion”. No verdict on behalf of serious scientists could be more appropriate: I believe that it could be subscribed even today by most scientists, not to mention institutions like the CSI (Committee for Skeptical Inquiry) in the USA or the CICAP (Comitato per il Controllo delle Affermazioni sul Paranormale) in Italy.

What the Committee missed, was to undertake a serious analysis of the efficacy of magnetic cures in terms of recovery, and investigate more deeply the intriguing efficacy of “suggestion”. They maintained that the effects were purely psychological (or “emotional”) and probably this is essentially due to two fundamental reasons: a) the ambiguous nature of the nervous or psychological syndromes, something between reality and delusion, or “pseudo-ailments”, and

b) the ambiguous nature of the term “imagination” (or “suggestion”) which, in some ways, can be interpreted as “self-delusionary”.

To accept that “suggestion” can represent something more, capable of eliciting in some cases true therapeutic effects, was very difficult at that time, and in part still is today, where the “Placebo effect” is well known and accepted by the medical community and in the methodology used to test the efficacy of a drug, but more as an extraneous interference than a curative condition (we reconsider this central point later). Ironically, the same Mesmer would have been against such an interpretation. He strongly believed in the efficacy of his therapy, as due to a real physical effect of animal magnetism.

Mesmer contested the conclusion of the Committee and he promised to leave Paris as he felt himself a target for his envious colleagues. Mesmeric cures became the subject of satiric pamphlets, booklets, articles, and posters (Fig. 3); one of these remarks: “si quel’esprit original persiste encore dans son délire il sera permis de lui dire: crois au magnetisme...animal!”



Figure 3. Anonymous satiric French cartoon, *The Magic Finger*, 1780 s. Mesmer practices his devilish sexual magic on a patient.

Mesmer, after traveling away from Paris for a while, returned to Paris after the request of many distinguished people and friends. After ten years he decided to retire and lived there until his death (1815) near his quiet native village totally forgotten by the rest of the world. Before his death he was visited by a member of the University of Berlin, where mesmerism started to interest some researchers, favored by the ideas of the so called “romantic medicine”, prone to accept, let me say in contemporary words, holistic and spiritualistic approaches to medicine, in some way anticipating the current views of some “alternative medicine”.

What can we conclude about Mesmer? In his time he was considered by his

contemporaries either as a charlatan avid for money, or as a charismatic man, a sort of genius ahead of his time.

Mesmer had an incredible resonance even from a socio-political point of view in the critical decade before the French Revolution, when, in Paris, many influential men like N. Bergasse, J.P. Brissot, J.J. D'Éprémesnil, G. Korman, La Fayette, then deeply involved in the revolution, not only considered Mesmer as the initiator of a special therapy but also of a new, “democratic” perspective of the world, as largely demonstrated by Darnton; but, at the same time, he gained the reprobation of a large class of men, mainly among academic doctors and scientists. This was to be the fate of the whole mesmeric movement, even in the Nineteenth century. The scientific establishment refused officially its tenets, not only for scientific reasons, but, as argued by sociologists and historians also for professional reasons, mainly on behalf of the medical community.

In the second half of the last century many authors have tried to rehabilitate his position in the history of Medicine as a precursor of the modern dynamic psychology and psychotherapy.⁵ As a matter of fact, it is not easy to re-frame Mesmer in a correct perspective since we must come to terms with a number of problems: among others, his real personality is difficult to reconstruct, because we don't possess a sufficient number of objective first hand testimonies; in his practice he is even more controversial, because his success was not due to the application of correct ideas, but more to his personal ability and charisma, probably together with a certain instinct and psychological intuition to produce the best conditions for a powerful suggestive action on the patients; his role in the later development of hypnosis and psycho-therapy, was more linked to the further development of Mesmerism on behalf of his followers than to his conceptualization of the phenomena.

Personally, I tend to see him as a typical kind of cultivated man, probably endowed with a primitive and vivid intuition, not always accompanied by a correspondent scientific and philosophical criticism, a typical mixture of a strong, perhaps excessive, self-esteem and self-reference with a sincere attitude towards ideals to benefit humankind. This mixture of virtues and defects probably helped him to have a large popular success on the one hand, but many enemies on the other. In a certain sense we can say that he was able to re-introduce the ancient thaumaturgic powers in a more acceptable way, dressing them with pseudoscientific aspects, apparently more palatable to a rational environment. Indeed, he never explicitly understood (or admitted) that the foundation of his therapy was not his pseudoscientific physical canon, but, in great part, the power of “suggestion”. This was clearly recognized by the scientists of the Royal Committee; but, in turn, this Committee did not recognize

5 See R. Darnton, H.F. Ellenberg, A. Crabtree.

the central role of suggestion in the process of recovery, because, as we will further clarify later, this was not clearly subsumable in the current scientific canon.

In spite of the judgment of the Royal Committee, mesmeric practices spread to all parts of France and abroad. Mesmer formed, together with N. Bergasse, a “Société de l’harmonie universelle”, a sort of association inspired by the Masonic lodges, where Mesmeric principles were taught. These kinds of societies flourished all over France. Deslon died in a few years, but the message of Mesmer and the mesmeric therapies propagated in all parts of Europe and America. Nevertheless the materialistic pseudo-physical theory of Mesmer was not accepted by his followers as such, and the attention shifted to a more psychological and, in some cases, spiritualistic perspective. One of the more enthusiastic of these followers was the Marquis Chastenet de Puységur, who, in some ways, suspended his opinion about the true nature of the magnetic fluid, underlining the importance of the “power of will” on the part of the magnetizer⁶.

He started to treat the peasants on his estate in Buzancy near Soissons, and was surprised by the response of a young patient, Victor Race, who suffered from a respiratory ailment. After being mesmerized he fell into an apparent deep sleep instead of falling into a magnetic crisis. In such a state his normally poor mental faculties seemed to be improved: he started speaking with clarity, he suggested the treatment for his ailment and even divined his master’s thoughts. In a few days he recovered. Puységur recognized that this sort of “induced somnambulism” or “sleep walking” was very peculiar and worth considering. He also preferred to substitute verbal commands for physical contact. This was the premise of what was later named “hypnotic techniques”. Interestingly, Mesmer in his second *mémoire* did not mention Puységur and attributed to himself the first observations of the somnambulant state, but depriving it of any significant importance with respect to its therapeutic power. Here again we face the attitude, if not the obsession, of Mesmer to manage in first person the theory and practice of animal magnetism, preserving his “own canon” from external interferences.

It is also interesting to observe that Mesmer’s crises and Puységur’s interrogation of patients during magnetic sleep appear as a primitive antecedent of the cathartic method used more than one century later by Breuer and Freud.

In the same time other disciples of Mesmer, among these, the Chevalier de Barbarin in Lyon and Petetin, shifted their attention from the magnetic fluid and the baquet to the faith of the patient and the will of the magnetizer, aided by the prayers to God, the supreme magnetizer – and they founded the Animistic Society of Harmony – they rejected any attempt to explain in a scientific and

6 See A.M.Y. Chastenet de Puységur, *Du magnétisme animal considéré dans ses rapports avec les différentes branches de la Physique générale*.

psychological way the phenomena, also stressing the visionary powers of magnetic trance. Petetin discovered induced catalepsy, also suggesting an application of the hypnotic anesthesia in surgical operations. In this brief description there is no space for a detailed report of the different ways taken by Mesmerism, throughout more than one century (see, for such a detailed account, A. Crabtree, *From Mesmer to Freud. Magnetic sleep and the roots of psychological healing*), but we can summarize the story by observing how it developed following various routes, including the continuation of Mesmer's practice and the belief in magnetic fluid, the animistic and spiritualistic approach leading to the faith healing of Christian Science on the one hand, and to mediumistic trance on the other, and, of course, the psychological and neurological aspects of induced sleep eventually leading to the scientific studies on the hypnotism and its application to psychotherapy and psychoanalysis.

Moreover, hypnotic sleep entered the theatres, and the magnetic performances became a subject of popular attraction, raising an occult fascination toward such practices. Mesmerism in a large sense permeated the Nineteenth century at different levels, from the highest, including the interest of philosophers such as Hegel and Schopenhauer and writers such as Balzac, Poe, Maupassant and many others, to the popular curiosity toward the theatre magnetizers.

In Fig. 4 an attempt is made to synthesize these various lines of development. In this description we are missing another development of the magnetic approach to therapy, namely the still active researches about the therapeutic applications of true physical magnetism and electricity.⁷ This is a totally different line, since, at the beginning of Nineteenth century progress in the knowledge of Physics led to the mathematical foundation of electromagnetism. In this context the term "animal magnetism" became no more than a metaphor.

Concerning induced sleep walking, it represented the bridge between primitive mesmerism and the scientific approach to hypnosis. The term "hypnosis" and "neurohypnology" was introduced by James Braid, a Scottish surgeon, who, after watching the performance of a theatre magnetizer, was persuaded that there was no "collusion" between the magnetizer and the magnetized, and started to study the phenomenon. He became convinced that "magnetic somnambulism" was a sort of sleep induced by the "concentration" of the patient's attentions more than to a power of magnetism, probably a neuropsychological effect, and introduced the method to focalize the patient's attention onto a small object, like a brilliant pendulum. The hypnotic trance was then used and studied by the great neurologist J.M. Charcot who can be considered the founder of modern neurology. He became famous, among other things, through his studies

7 See F. Bersani (ed.), *Electricity and Magnetism in Biology and Medicine*.

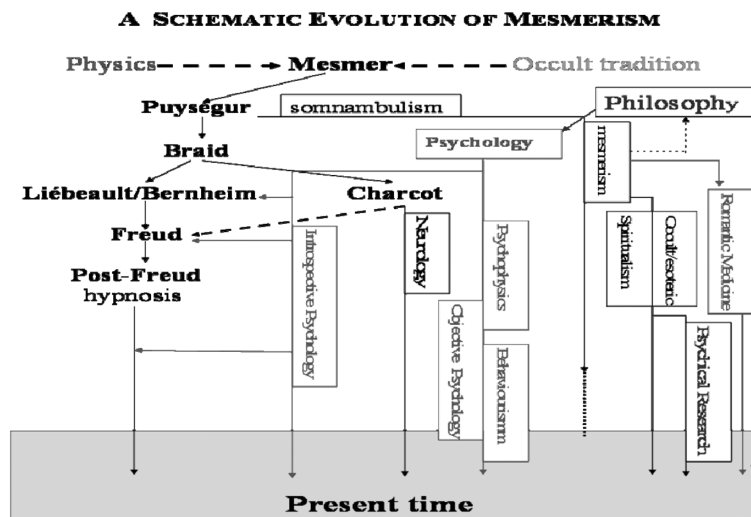


Figure 4.

of hysteria, and interpreted the hypnotic state as a typical hysterical response. He was the director of the Psychiatric Hospital Salpêtrière and the very spectacular hypnotic performances with his patients represented a true attraction in Paris. His lessons were also followed by Freud, who was interested in using hypnosis as a therapeutic tool for curing neuroses.

The “Paris School of Hypnosis” led by Charcot, had its counterpart in the Nancy School of Auguste Liébeault and Hyppolite Bernheim, who contrasted Charcot’s views by considering hypnosis as due to suggestion of the part of the hypnotists leading to a physio-psychological response, without any pathological aspects. They used mainly verbal suggestion, obtaining good therapeutic effects.

The story of Freud is well known⁸. In short, together with Breuer he first used the cathartic method employing hypnosis, but then he recognized that the results were unstable; moreover, not all the patients were able to enter the hypnotic state, resulting in a frustrating situation. Thus, after many attempts, he eventually decided to substitute hypnotic methods with that of “free association” and “dream analysis”; in the opinion of Freud himself this, in some ways, marked the end of the golden period of hypnosis. Of course, this is only partially true because the hypnotic techniques continued into the Twentieth century, and are still present today, even if essentially considered, in the medical practice, as just one of the many tools in the hands of doctors and psychotherapists. In other

⁸ See A. Gauld, *A History of Hypnotism*.

words, they became, in a sense, domesticated, in order to fit scientific and medical acceptance.

If we look at the development of medical Mesmerism and hypnosis as it is largely recognized also for all its psychological and psychopathological manifestations, we can easily see how those manifestations strictly and strongly depended on the social context, but also on the expectations of both experimenters and patients, as well as on the interpretation offered for the observed effects: from the quasi-thaumaturgic aspects of Mesmer's recoveries to the spectacular performances of the hysterical patients of Salpêtrière in the hands of Charcot and, eventually, to the more restricted and professional applications of hypnosis in the context of contemporary Medicine and psychotherapy.

Nevertheless I believe that it would be misleading to reduce Mesmer and the complex and articulated movement originating from his practice, merely to an anticipation of modern psychotherapy and psychoanalysis. The movement influenced many disciplines, and its study sheds new light on many aspects of human activities and thinking.

Concerning, from a scientific point of view, the core problem of mesmerism, besides the studies on hypnosis and its potential, though still controversial, applications to medicine and psychotherapy, is the problem of the relationship between body and mind, and the potential role of psychological conditions in the recovery from pain and disease, which is still today an open issue. In a psychosomatic perspective, in particular, the role of what we call, probably using a misleading word, "suggestion" (or/and "self-suggestion") is, in my opinion, still waiting for an extensive investigation. Today the therapeutic potential of "suggestion" is housed in biomedical research under the name of the "Placebo effect" along with its negative counterpart, the "nocebo effect". This mysterious and ambiguous presence is, in some ways, within and out(side) of the paradigm of Science, and it is curious to notice how it is considered, as we mentioned before, more as an annoying interference than a true mechanism actively entering in almost all the processes of recovery. Whenever the efficacy of a drug is tested, a comparison is performed with a "sham drug", namely a neutral substance having the same aspect as the true drug but without any therapeutic property from a chemical ("objective") point of view, and the experiments are conducted "blind" and "double blind".

Incidentally, it is well known that a large part of the efficacy of many pharmaceutical substances (especially in the case of some psycho-drugs) are due to the Placebo effect.

Of course, one of the peculiar features of the suggestive action and its therapeutic potential is strictly linked to the fact that the subject "believes" in the power of a drug ("la foi qui guérit"); but this is not only restricted to a drug, but

applies to many situations, including particular objects (think of an amulet in the culture of magic and superstitions), a charismatic person (sciaman, faith healer, or Mesmer himself!), a particular circumstance or practice, like an alternative therapy or psychotherapy, even independently from their “objective” therapeutic potential. It is also worth noting that, in general, another general characteristic of the “suggestive effect” is that the subject, in some way, attributes the therapeutic power not to himself, but to some external power: to borrow a descriptive expression from psychiatry, a sort of “ego-alien” condition.

It is clear that for a drug or whatever else, the curative aspects of this condition hold insofar the subject does not know, or does not learn that the assumed drug is fictitious and thus intrinsically ineffective. The awareness of its real nature destroys the effect; this paradox is at the basis of the partial irreducibility of such process to the paradigms of the positive science and its applicability becomes increasingly ineffective as long as we pass from a magic culture to one more rationalistic, based on the objective datum.

Nevertheless, biomedical research in the last decades has largely demonstrated how psychological conditions can affect the physiology of our body; experimental psychophysiology has shown how strictly linked the nervous system is to the immunological and endocrine response. In this context is not totally irrational, even though not fully demonstrated, that a “suggestive” process may result in a specific brain condition capable, in some circumstances, of eliciting a therapeutic benefit, but the degree of the extension of such effect and the degree of its reproducibility is still waiting for an extensive investigation, which nevertheless is partially prevented by the intrinsic limits of a free investigation on this topic also from a deontological point of view. Notwithstanding in the very last years a number of interesting studies have been performed on Placebo effect, also taking advantage of the new neuroimaging techniques.⁹

As we can see, the core problem of Mesmerism is still alive, and reveals how difficult it is to fit it into the established scientific canon even today.

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9 See R. Eccles, KSJ Eccles, *Placebo effect*; May-Britt Niemi, *Placebo effect : a Cure in the Mind*.

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