



## Learning From the Past: From Incubation in Ancient Egypt and Greece to Modern Hypnosis

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### ABSTRACT

The origin of hypnosis can be dated back to ancient philosophies and medicines. Incubation had been used in ancient Egypt and Greece for some three millennia with the same indications of modern hypnosis and was well-known by both Hippocrates and Parmenides. Then, it was dismantled by Christian hagiographic propaganda in 4-5<sup>th</sup> century AC and buried to the oblivion. Again, the birth of the new sciences in 17<sup>th</sup> century was the result of a compromise with Church, forcing them to limit their field of interest in the Cartesian *res extensa* only, leading to consciousness and mind-body relationship being neglected for political-religious will, rather than scientific grounds, and to Hippocrates' teaching being betrayed. As a result, the history of hypnosis was marked by its outstanding results paralleled by misunderstanding and prejudicial refusal, a fact endowed with deep epistemological implications.

### INTRODUCTION

The origin of hypnosis is commonly attributed to Franz Anton Mesmer in late 18<sup>th</sup> century, but its origin dates back much farther and is mixed up with the heart of healing, as well as all disciplines devoted to grasp information from the unknown, including shamanism, philosophy and religion. Ancient Egyptian and Greek medicine was intimately connected with the religion and the sacred and used incubation as healing technique, a view also held by Hippocrates – the great father of modern medicine, whose oath is still at the base of medical profession – and perfectly compatible with his rationality and wisdom. There is a close connection between all of these age-old disciplines and Non-Ordinary Mental Expressions (NOMEs) – a term introduced to overcome the questionable concept of altered state of consciousness and gather all non-pathological, ostensibly odd but meaningful experiences, including hypnosis and meditation[1,2]. Here, the practice of incubation in ancient Egypt and Greece will be shortly outlined wondering whether it may be considered as the first form of clinical hypnosis; the reasons of its disappearance from the history of Western medicine until its reintroduction by Mesmer in late 18<sup>th</sup> century will be also outlined.

The topic calls for taking a look at the origin and development of philosophy and medicine and their close relationship with religion from prehistory to the medicine in the Middle Ages, up to

the academic teaching of medicine and the birth of modern sciences in 17<sup>th</sup> century. This excursus may allow to better understand the relevance of hypnosis in medicine as well as its misunderstanding and prejudicial refusal in the past two centuries, a topic endowed with deep epistemological implications.

## ORIGIN OF PHILOSOPHY AND MEDICINE

The prehistoric pan-Asiatic shamanism can be considered as the source of both Eastern and Western philosophies and medicines [3–5]. Shamans (the term shaman means man of knowledge) were the first physician-healers, who investigated diseases and their treatment with a holistic approach merging body, mind and environment in a whole as inseparable components of a single world, including both the visible and the invisible. Besides the administration of plants (including psychotropic agents), surgical procedures and other remedies, their healing procedures and rites included NOMEs in order to exploit the potentialities of the soul of both the shaman (e.g., shamanic journeys) and the patient in the process of healing. Figure 1 schematically shows the origin and development of both Eastern and Western philosophies and medicines from the prehistory up to the birth of Western *Schola Medica Salernitana* (the Salerno Medical School) and first universities with their medical schools.

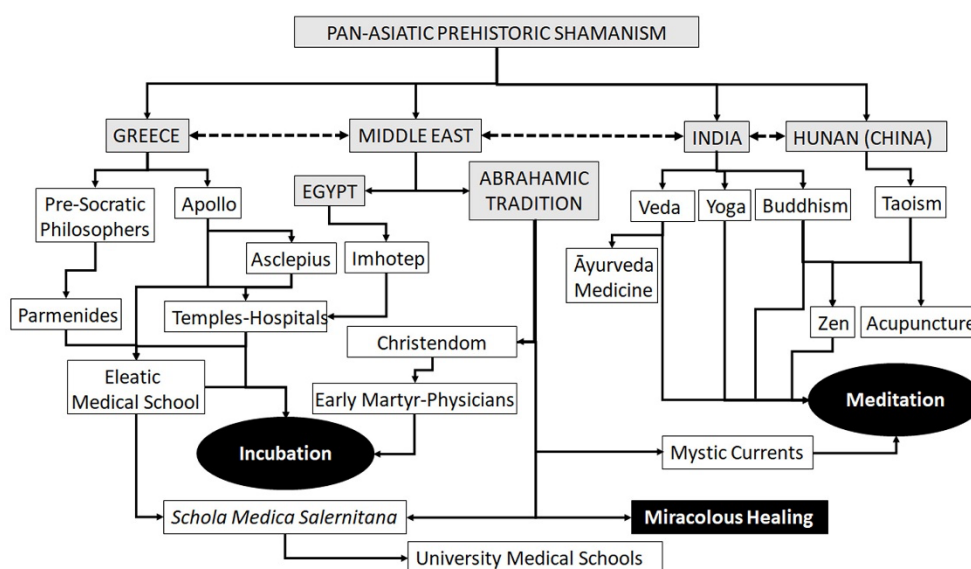


**Fig. 1: Origin of Eastern and Western philosophies from pan-Asiatic prehistoric shamanism and the birth of medicines from them, including the use of incubation and meditation (modified from Facco & Tagliagambe [26]).**

Both Greek and Egyptian medicines underwent a great development in ancient times. The temples of Imhotep in Egypt and Asclepius in Greece were temple-hospitals where both soul and body were cured with a holistic approach, and where the sacred, religious aspect was fully compatible with the naturalistic, technical one. *Ἐγκοίμησις* (*enkoímesis*, incubation) was an essential practice of ancient medicine with a thousand-year old tradition, starting at the boundaries of prehistory and lasting until the Dark Ages.

Eastern philosophies also had their medicines. Traditional Chinese Medicine and acupuncture stemmed from Taoism and adopted its paradigm, while *āyurveda* medicine (the term *āyurveda*

means knowledge of life) belonged to Veda tradition. All Eastern philosophies have unvaryingly merged theoretical and practical philosophy in a whole adopting a non-dualist perspective and devoted themselves to self-knowledge and the way for emancipation – i.e. the liberation from all attachments, conditioning, up to the level of wisdom, sageship and enlightenment. Therefore, all of them included meditation as an essential practice aimed to get rid of *Māyā*, the mask of illusion of ordinary consciousness; this goal involved the development of metacognition and resilience, allowing for subject's empowerment – viz. the enhanced control over one's mind and body on the way to enlightenment [6,7].

There is a close link between modern hypnosis and Eastern meditation techniques [3,8–13], a fact leading to mindful hypnosis being recently introduced [14]. In fact, the first mesmerists were strongly interested in Eastern philosophies and healing practices – considered akin to their discipline – and claimed that Mesmer had only given them a scientific aspect. In early 19<sup>th</sup> century *The Zoist*, a journal on mesmerism, published several articles dealing with Indian practices, compared to magnetic steps able to induce a trance. Yogic and Buddhist meditation (also called *hibernation*) as well as Taoism were also compared to mesmerism; in the opinion of Sandby (1848), the Yogee “*induced the ecstatic or Mesmeric condition*” through deep meditation [9,12].

In short, the origin of modern hypnosis can arguably be traced back to two different traditions: the ancient Greek and Egyptian medicines with their practice of incubation – the technique of which has been irremediably lost in the Dark Ages – and the Eastern meditation, from which the first mesmerists drew relevant information. Despite there is no direct connection between incubation and hypnosis, the former was a long-lasting practice persisted in Western medicine for some three millennia, regularly used with the same medical and surgical indications of modern hypnosis. Both of them can be conceived as mind-body techniques, based on doctor-patient relationship and subject's plastic imagination enhanced by a guided procedure. The lack of connection depends on incubation having been canceled out in the first centuries AC due to Christian hagiographic propaganda.

### INCUBATION

Imhotep was the architect of the Pharaoh Djoser who built the pyramid in Saqqara; he was also a priest of Ra, the Egyptian deity of the sun, and so great a physician as to be deified as health protector following his death. His worship was initially in Memphis and then spread to the whole Egypt. It is not clear whether the Serapis' worship in Saqqara also included incubation for healing or was devoted to oneiromancy only, while incubation was practiced in Alexandria and Canopus, especially following the reign of Ptolemy I (367-282 b.C.) and Hellenization [15,16]. A Serapeum was also built in Rome close to the temple of Minerva (the Greek Ἀθηνᾶ, Athena), above which the current church of Santa Maria Sopra Minerva (St. Mary Over Minerva, close to the Pantheon) was built.

Egyptian medicine was highly developed and specialized. Outstandingly, the Surgical Papyrus (discovered by Edwin Smith in 1862) described 48 cases of head and spinal cord injuries, including tetraplegia, aphasia, hemiplegia with the corresponding brain lesions, and already reported the cerebrospinal fluid in 2500-3000 BC [17–19]. It is worth noting that in the West,

it was described first by Domenico Cotugno in Naples in the 18<sup>th</sup> century, i.e., just 4,500 years later [20,21].

The Edwin Smith papyrus clearly shows that the medical science and its sacred aspects were fully compatible, and the same was for Hippocrates. Thus, one must be aware that their opposition is a strong bias introduced by comparatively recent historical-political circumstances – i.e., the exclusivist ideology and temporal power of the Church and its conflict with the nascent sciences in 17<sup>th</sup> century (see below).

Likewise Egyptian physicians, the caregivers of Greek Asclepeions – including Hippocrates, who was considered as a direct descendant of the demigod Asclepius – were priests-physicians inseparably merging the naturalistic medicine with its sacred component. The enlightened Hippocrates' rational approach (*loghismós*) was wider and wiser than the one of modern reductionist approach of biomedicine. Actually, it was based on the concept of *δύναμις* (*dýnamis*, power), i.e., the dynamic interrelationship of the mind-body-environment as an inseparable whole. This concept has been well painted by Plato in few words in the *Phaedrus* (270b):

*[Socrates] Do you think, then, that it is possible to reach a serious understanding of the nature of the soul without understanding the nature of the world as a whole?*

*[Phaedrus] Well, if we're to listen to Hippocrates, Asclepius' descendant, we won't even understand the body if we don't follow that method.*

Thus, the Hippocrates' rationality was holistic in nature and warned against the inclination to arbitrarily separate what in nature is not, a fact preventing a proper comprehension of the reality. The Hippocratic *dýnamis* can be considered as an outstanding intuition of the modern concept of complex systems – a topic only recently appeared in biological and medical literature – the *modus operandi* of which cannot be properly explained by an inflexible reductionist-determinist perspective [22–25]. Actually, a complex system is a dynamic, non-deterministic phenomenon characterized by an unceasing exchange of information between its components, where any effect is a potential cause of other effects in an integrated, inseparable whole. Thus, it evolves over time and is able to change its response to the same stimuli, thanks to the unceasing exchange of information between its parts. The current COVID-19 outbreak is the most recent example of the dynamic interrelationship and coevolution man-virus-environment, including the whole of seasonal factors and social behaviors, virus mutations, herd immunity and vaccination. This concept had already been well painted by Plato (Phaedrus, 270 d,e):

*[Socrates] Consider, then, what both Hippocrates and true argument say about nature. Isn't this the way to think systematically about the nature of anything? First, we must consider whether the object regarding which we intend to become experts and capable of transmitting our expertise is simple or complex. Then, if it is simple, we must investigate its power: What things does it have what natural power of acting upon? By what things does it have what natural disposition to be acted upon? If, on the other hand, it takes many forms, we must enumerate them all and, as we did in the simple case, investigate how each is naturally able to act upon what and how it has a natural disposition to be acted upon by what... Proceeding by any other*

*method would be like walking with the blind. Conversely, whoever studies anything on the basis of an art must never be compared to the blind or the deaf.*

The Plato's argument correctly emphasizes the dynamic, inseparable relationship between the parts of complex systems, where any part with its power of "acting upon" may be at the same time the "disposition to be acted upon". This clearly describes the system as a dynamic whole endowed with reciprocal exchange of information and cause-effect relationship between its parts, a system of which no part can be arbitrarily separated unless one wants to proceed like "the blind or the deaf". Instead, the reductionist approach of modern medicine is inclined to split the living being in separate and at least partly independent parts in a mechanist-conceptual fragmentation, a priori neglecting the role of mind in both health and disease [26,27]. The concept of *dýnamis* also emphasizes the high complexity of medicine and its nature of endless work in progress, open to any possible kind of change and evolution and making any result necessarily provisional in an ever-changing complex system.

To summarize, Hippocrates has introduced a wise holistic rationality, emphasizing the impossibility to understand both mind and body when split from each other, and from the whole. Although the concept of the whole (*ὅλης φύσεως, hólēs phýseōs*) is not clearly defined, it is reasonable interpreting it as the mind-body-environment dynamic interrelationship. It is a topical concept, worth being taken into account, given that the positivist-materialist stance has led to unduly neglect the role of subjectivity and consciousness.

It is worth noting that the Hippocrates' teaching also meets the WHO's definition of health: Health is a state of complete physical, social and emotional well-being, and not merely the absence of disease or infirmity [28].

This definition, adopting the concept of positive health (viz., living well rather than living long only), allows one to appraise the relevance of psycho-existential dimension of the patient, rather than reducing him/her to a passive, powerless carrier of an organic disease [29]. This is of paramount importance in palliative care too, a condition endowed with deep philosophical implications where hypnosis may play a central role in relieving suffering [30]. According to the WHO's definition of health, a reductionist medicine limited to the treatment of physical diseases only through mechanical interventions on the body, by definition is not enough to ensure health.

The early stages of the cult of Asclepius and its medicine started in the pre-Homeric period and its worship persisted until the 4-5<sup>th</sup> century AC. The temples-hospitals (e.g., see the Asclepius temples in Epidaurus) were sets of buildings also including the *stoa* (the hostel for patients' admission), a theater and a gymnasium, all to be considered as inseparable parts of a whole, devoted to take care of the patient's body and soul. In fact, Greek tragedies performed in the theater allowed patients to face the darkness of human existence and its profound psychosocial problems favoring catharsis and, thus, healing from psychological suffering [31].

In Asclepius' temples – also called "sleep temples" – the patient was admitted to the *Einkometerion*, also called *abaton* (*impenetrable*, i.e., the secluded part forbidden to people not prepared to meet Asclepius), where incubation was induced, during which he/she dreamed the god Asclepius providing instructions for healing. The temple of Epidaurus was built in two

levels: patients prepared themselves to incubation in the upper floor, purifying themselves with water and reading the narrations of wonderful healing, while incubation was performed in the ground-floor (figure 2).

Actually, the ritual of preparation was rather complex and structured in different phases starting before entering the temple: a) purification rites (including diet, bath, three-day sexual abstinence); b) a detachment from both birth and death, at least in the late Roman period (i.e., not visiting a new mother and/or her son, seeing a corpse or take part in a funeral); c) sacrifices of animals or, as an alternative, sweets and honey offering; d) wearing a proper gown (a white gown was used by priests and also indicated the intention to be incubated). A fee (*eparche*) was also required in most temples. On psychological standpoint, purification meant having holy intentions and a righteous mind, not clouded by thoughts and interests. As Porphyry reported (*On Abstinence from Animal Food*, 2, 19).

In Epidaurus, therefore, there was the following inscription on the doors of the temple:

*Into an odorous temple, he who goes  
Should pure and holy be; but to be wise  
In what to sanctity pertains, is to be pure.*



**Figure 2: *Abaton* of Asclepius temple in Epidaurus (Greece): upper level (top) and ground-floor (bottom).**

This is akin to the warning γνῶθι σεαυτόν (*gnôthi seautón*, know yourself) in the Apollo temple in Delphi, an essential precondition to access oracles with a sound and neutral mind, a prerequisite to correctly interpret them.

A wealth of data is available on incubation [26,32–36], but the details on the procedure of induction and deepening are lacking. In early period incubation included simple, directive suggestions of recovery; then, it was implemented over time with therapeutic suggestions – e.g., advises about proper behavior, dietary regimen and physical activity, according to the development of medical knowledge. In many cases the god Asclepius personally treated the patient as well; this especially occurred when surgery was performed during incubation. In *Onirotica* (V, 61), Artemidorus reports on a patient with an abdominal abscess who, brought to the temple, dreamed Asclepius operating him on and then, waked up healed (Edelstein & Edelstein, 1998, p. 235):

*A certain man dreamed that, struck in the belly by Asclepius with a sword, he died; this man, by means of an incision, healed the abscess which had developed in his belly.*

The incubation was usually depicted with the patient laying in the *klinai* (bed) and the priest-physician inducing incubation behind him/her. Indeed, they can be considered as a sort of four-dimensional pictures merging in a whole both the in the three-dimensional physical reality of the *Abaton* and the imagined realm of the patients being cured by Asclepius, as shown in figure 4a. The same is for a small fresco found in the house of Sirico in Pompeii, depicting the surgeon Iaspi drawing an arrow from Aeneas' thigh (figure 4b). The right part of the fresco shows the intervention, while in the left part his mother Aphrodite is assisting him, with a structure similar to that of figure 4a. What is peculiar here is the calm expression of Aeneas' face in an upright position – an unlikely one for surgery – with the gaze upwards, a position similar to the one used in the induction of

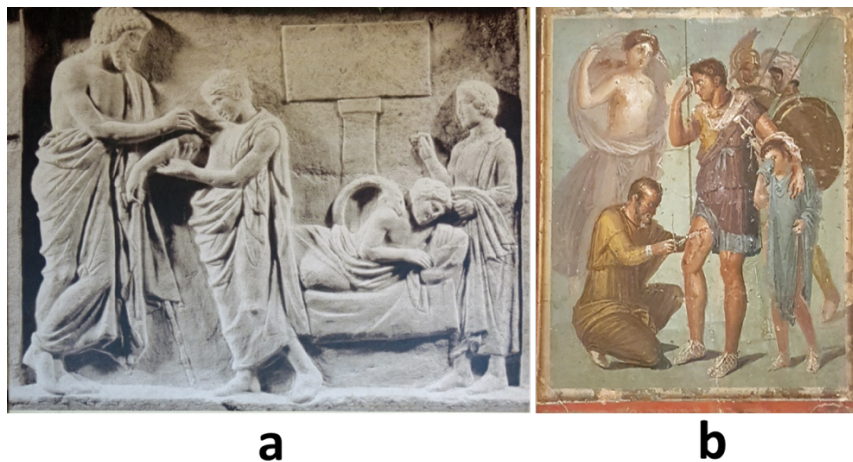


**Fig. 4: Incubation in the Asclepeion of Epidauros (a): The right part of the figure depicts the incubated patient's with the snake sacred to Asclepius resting on his right shoulder, while the left one shows the imagined god curing it (4<sup>th</sup> century BC; first stela, A.C. IG IV2 1, no. 121). (b) a small fresco from Pompeii, depicting the surgeon Iaspi drawing an arrow from Aeneas' thigh; the intervention is depicted in the right part of the figure, the left part shows his mother Aphrodite assisting him (Archeological Museum, Naples, Italy).**

tantra meditation [37,38], and also recalling the eye roll in the Hypnotic induction profile [39]. This hints to an intervention performed in incubation, where Aeneas gaze and his vision of Aphrodite may be its clues [26].

As a whole, the available data suggest the hypothesis of incubation as the first form of clinical hypnosis, based upon plastic monoideism and used as a psychosomatic procedure for healing as well as a sedative-analgesic for surgery. In fact, ancient medicine considered illness as an imbalance of the mind-body unit, where mind could be a relevant factor for recovery. Accordingly, healing was achieved through an experience at the limit between life and death – with the body still like a hibernating animal – a procedure showing interesting links with the ritual of initiation in Eleusinian Mysteries, shamanic journeys and other non-ordinary mental expressions like near-death experiences, these last also showing a link with hypnosis [40,41]. It is worth mentioning that incubation was also practiced by Native American Indians, for both healing and rites of passage [42].

The physician-priests of Asclepius increasingly used medications and surgery over time according to the development of naturalistic medicine, the Hippocratic School provided a huge amount of knowledge to. In its late period, Asclepius medicine used a sophisticated set of surgical tools, including a drill to perform burr holes, almost identical to the trephine today used in neurosurgery (figure 3). Anyway, it remained inseparably united to the sacred in a holistic, psychosomatic approach, according to the concept of *dýnamis*. In this regard, it is worth emphasizing that philosophy, science and religion were not split in ancient time. Parmenides – the great philosopher of the Being and Nihil, named by Plato “Venerable and Awesome” in the *Theaetetus* (183e) – was not a philosopher in the modern sense of the term. He was a priest of Apollo Oulios – the ambivalent god of health and disease, destroyer-healer, father of Asclepius. He was also *iatros* (physician), *iatromantis* (healer), *phôlarchos* (lord of borrows – viz., the borrows of snakes sacred to Apollo – a term indicating his expertise in incubation), as well as founder of the medical Eleatic school (Facco & Tagliagambe, 2020; Kingsley, 1999; Vecchio, 2004). Thus, Parmenides can be considered as a philosopher-priest-physician and senior colleague of Hippocrates, who in turn shared the Parmenides’ concepts of Being and Whole, as reported in *De Diaeta* (I, 4, 9):

*Neither a thing may become nothing nor anything not previously being be may start to be, but everything changes for mixing and separation...It is not possible that what is not may start to be.*

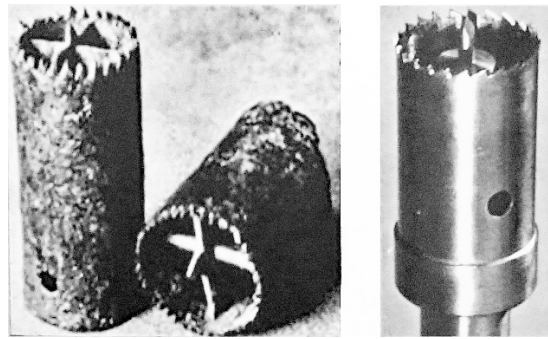


**Fig. 3: Drill for trepanation of the skull performed by Hippocratic physicians found in Kos (left; International Hippocratic Foundation, Kos, Greece) and a current trephine used today in neurosurgery (right).**

### BURYING INCUBATION TO OBLIVION

The practice of incubation persisted for some fifteen centuries in Greece, from the pre-Homeric period to the 4-5<sup>th</sup> century AC. At the beginning of Christianity incubation was still compatible with the medicine of early physician-martyrs, like Cosmas and Damian; for example, it was practiced in the shrine of the Egyptian saints Cirus and John close to Canopus as a syncretistic remnant of Greek-Egyptian tradition initially survived in early Christendom (*Patrologia Graeca*, 87, 3424 "*Sophronii Monachi Sophistae. Narratio Miraculorum SS: Cyri et Joannis Sapientium Anagyrorum*";[43]).

At the same time, the great theocratic design of the *Magna Ecclesia* (Great Church) – pursued by the Catholic Church following its formalization as the state church of the Roman Empire in 380 AC – started the Christian hagiographic propaganda aimed to bury paganism to oblivion. This goal was achieved by building Christian churches over previous pagan temples and superimposing Christian rituals and celebrations on previous pagan ones. For example, Christmas was superimposed to the cults of the Persian Mithra and Roman Helios, solar deities antagonist of darkness and evil, whose celebration fell just after the winter solstice – i.e., December 25, called in Rome "*Dies Natalis Soli Invicti*" (*Birthday of Unconquered Sun*). Likewise, Egyptians celebrated the sun birth as a child born of the Celestial Virgin on January 6 [44]. Thus, current Christian celebrations of Christmas and Epiphany coincide with the ancient Mithra and Helios celebrations and share the common archetypical aspect of the birth of light – physical and spiritual at the same time.

Since its foundation, the Church considered the care of the sick a valuable charitable work and Christ himself was defined as healer of both body and soul, especially of the body as a function of the soul. This led to the birth of the first Christian physicians-martyrs and the conversion of pagan treatment centers into Christian hospitals, where Christian physicians were *anárgyroi* (i.e., they provided free treatments) [45]. At the same time, the Christian hagiographic propaganda used all means to dismantle Asclepius medicine [26]; for example, Clemente of Alexandria in *Prorépticos* accused Asclepiads to be stingy (a fee was required in their temple-hospitals) and the statues of Greek gods only valueless dead matter, on which birds could disrespectfully leave their droppings. Likewise, Origen railed against Asclepius, defined as a false god since he had been struck by Zeus, warning that even miracles may be ambiguous since marvels may also come from demons (*Contra Celsum* 3, 22-24).

Thus, incubation was buried to the oblivion forever, together with Asclepius and Apollo medicine. However, some elements of incubation persisted as a syncretic aspect in the Middle Ages, but the name incubation was lost. In 9-10<sup>th</sup> century AC several Aslepiad-like healings were reported spending the night in Christian shrines close to the tombs of saints (e.g., *Miracula Sancti Agnelli* and *Sancti Agrippini*, reported by Mallardo [46]). Interestingly, miraculous recoveries were reported in a condition of *somnum, sed clare vigilantes* (sleeping, but clearly aware) begging for recovery in the sanctuaries [26,46–48]. This locution replaced the lost term incubation; at any rate, it hinted to an altered stated of consciousness (or, better, a NOME on authors' opinion) at that time defined as an intermediate condition between ordinary consciousness and sleep: this remained the essential prerequisite for healing.

Thus, today's sanctuaries like Lourdes are the remnants of a thousand-year old tradition starting in the prehistory and technically used for some three millennia by skilled physicians-priests in Egyptian and Greek temples. Following its deletion, incubation was reduced to a matter of patient's hope only, deprived of the technical support by Christian priests; in this context, the art of healing and its procedure were irremediably lost and reduced to a matter of patient's faith and God omnipotence only. At any rate, the belief in miraculous healing has persisted until today and is clearly witnessed in many churches and holy places. If this is the case, one can argue that it reflects an insuppressible need (and perhaps a faculty) of human kind, unceasingly persisting from prehistory to current days; perhaps, it is not a plain form of superstition, but may reflect a clinically relevant though misunderstood psychosomatic potential.

### EPISTEMOLOGICAL IMPLICATIONS

The above-mentioned practices have been neglected or even disparaged as expressions of primitive illusory beliefs by the modern medicine, stemming from materialist monism and adopting a mechanist-reductionist perspective – anyway, a metaphysical stance based on undemonstrated axioms and theories.

The *Schola Medica Salernitana* was born in Campania Region close to Velia (the Greek Elea) in the early Middle Ages and became the most important European school of medicine at that time. Its foundation was transcultural, merging in a whole the knowledge of Hebrew, Egyptian, Arabian, Latin and Greek medicine (arguably including the Eleatic medicine), a fact narrated as a tale in the *Chronica Helini*, a text of late Middle Ages. Then it underwent a slow decline after the foundation of the Universities of Bologna and Padua in 1220 and 1222, respectively (the first two universities in the world), followed by Naples in 1224. Finally, it was closed by Joachim Murat in 1811 [26].

The *Schola Medica Salernitana* underwent a huge development, but no remnants of incubation can be found in it. Its pharmacopeia included over 500 remedies, while surgery included also major interventions; it is noteworthy that the well-known Trendelenburg position in surgery (introduced by Friederich Trendelenburg in late 19<sup>th</sup> century) as a matter of fact had already been introduced by Ruggero Frugardo in 12<sup>th</sup> century in his treatise *Rogerina* or *Post Mundi Fabricam* [49]. The further development of scientific medicine in universities did not alter the close relationship between science and philosophy; until early 18<sup>th</sup> century medicine belonged to human sciences and the degree was in "Medicine and Philosophy" (a diploma of University of Padova dated in 1698 has been reported elsewhere [50]).

As analyzed in detail elsewhere [26,50,51], the birth of modern sciences in 17<sup>th</sup> century was not based on a sound epistemological reflection; rather it was the result of a political friction with the Church, claiming the exclusive competence on the soul (consciousness). This resulted into an ill-founded dualistic split between the sacred and the secular, the material and the immaterial, the soul and the body, where Descartes' radical dualism was a loophole aimed to allow for a compromise with the Church – a sort of metaphysical guillotine making logically incompatible what is undivided *in vivo*.

Since then, the development of Galilean sciences moved through Enlightenment, Empiricism, Positivism and materialist monism, increasingly focusing on the physical reality while neglecting the (forbidden) world of subjectivity. The conception of science as the most effective method to get the objective knowledge of the reality reached its peak with the Circle of Vienna and Carnap's logic positivism in early 20<sup>th</sup> century, claiming that, a) any trace of metaphysics should be removed from science and, b), only what can be observed and verified is real [52]. On the other hand, the foundation of logic positivism and physicalism remains metaphysical in nature, while its principle of verification is a bad one; in fact, it leads to what cannot be explained by the adopted axioms and theories being a priori rejected, with a high risk of a dogmatic drift. Therefore, the embarrassing concept of verifier underwent a progressive dampening within the logic positivism [53], and has been then replaced by its opposite, i.e., the Popper's concept of falsifiability [54]. Furthermore, the claim of getting rid of any remnant of metaphysics is self-contradictory, i.e., it is a metaphysical concept in itself, entailing an irruption of metaphysics in science [55].

As a result, the ruling positivist-objectivist approach of medicine has a priori neglected the role of consciousness until the birth of quantum physics; this also led to hypnosis being misunderstood, for its paradigm was unsuitable to study subjective phenomena (Facco, in press; Tagliagambe, Fracas, & Facco, 2020)

### WHAT WE CAN LEARN FROM THE PAST

Medicine has been closely linked to the sacred since the beginning of human history, holding a holistic approach both in the East and the West; Nature was contemplated as a whole, where human beings were immersed in an inseparable relationship mind-body-world. The development of naturalistic medicine was never at odds with philosophy religion until comparatively recent times, when a friction stemming from politics and will of power, rather than philosophy, occurred: this makes its results epistemologically inconsistent. In fact, on the one hand the history of science is the history of the will of power [58,59]; on the other hand, the Church has always claimed the exclusive competence on the soul. The political compromise was reached in 17<sup>th</sup> century at the unbearable price of an ontological split between the Cartesian *res cogitans* and *res extensa*, in order to let the former being assigned to the Church and the latter to the science: at any rate, a political compromise not a truthful thought.

To summarize, the Church strongly affected the history of medicine, by depriving it of the soul and related healing techniques in two historical periods: incubation first, and then consciousness. This led to incubation being lost forever and medicine being focused on the Cartesian *earthen body machine* only, reifying living creatures and reducing human beings to small clocks immersed in the great Newtonian clock of the universe. Of course, the design of the *Magna Ecclesia* was not bad in itself, aiming to disseminate (but also impose) the Christian ethic

(an outstanding revolution in the Abrahamic tradition). Nevertheless, Jesus Christ has been stifled by the imposing ideological superstructure of the doctrine developed by the Church throughout history, that has strongly risked to favor the form, the exteriority and the social control over the inner, spiritual development at the core of Christ teaching [60]. As a result, the historical-political circumstances behaved like a powerful cultural filter preventing the secular knowledge and therapy of both the soul and the suffering, including psychosomatic implications of diseases and functional disorders. Accordingly, the birth of modern psychology was postponed to the latter 19<sup>th</sup> century and the science of consciousness to the 1980s [50].

If the above discussion is correct, the time is ripe to reappraise the whole topic and give back to consciousness its full-fledged role in both health and disease, neglected so far by the positivist-objectivist approach. The value of reductionism is not in discussion here: it is a valuable and powerful method, but it is only a method born to study the relationship between physical facts pertaining to the *res extensa*, but not enough to comprehend the subjectivity and its dynamic interplay with the world. In other words, the living mind-body unit cannot be reduced to a simple matter of logic contradiction based on metaphysical unyielding assumptions. Rather, one should reexamine their foundation, in order to rediscover the relevance of the Hippocratic concept of *dýnamis* and the *fil rouge* linking a series of religious-political (nonscientific) facts leading to incubation being dismantled, consciousness dispossessed from the new sciences, and hypnosis being misunderstood.

Actually, the mainstream medicine is inclined to cure organic diseases rather than patients and does it aggressively in advanced and preterminal patients, confounding the concepts of ill and dying. Furthermore, it unfairly takes patients for flat, passive carriers of disease, neglecting their active role in the process of both recovery and worsening, despite a wealth of data on placebo and nocebo has clearly shown their relevance [61–65]. Placebo is not a “false” therapy based on an ill-defined and misunderstood idea of suggestion (actually, in the absence of “true” effects, the placebo branch in controlled studies would be meaningless); instead, it is a real effect favoring the process of healing and lasting up to several months, as previously shown in migraine [66].

The opposite is for nocebo effect, able to worsen patient’s conditions. For example, dental anxiety and phobia are significantly related to previous bad experiences in the dental and medical settings and show some elements of post-traumatic stress disorder yielded by doctors’ bad behavior [67,68]. As far as pharmacological therapy is concerned, the nocebo effects may cause adverse events in 30-80% of patients in the placebo group [69–74]. Likewise, reading the information leaflets may cause adverse events in up to 47% of cases [75]. If this is the case, the high rate of adverse events in pharmacological therapy is a relevant topic that cannot be properly understood and managed without taking into account patients’ subjectivity: here, hypnosis may paradoxically help improving the safety of pharmacological therapy by increasing patients’ compliance and decreasing adverse events.

### **ABOUT THE SACRED ASPECT OF MEDICINE**

At the end of this article, it is worth shortly outlining the meaning of religion and the sacred from a secular, anthropological perspective, given their inseparable role in ancient medicine and their withdrawal from modern medicine despite their potential relevance. Actually, spirituality and religion and, more generally, anything with the flavor of transcendence have

been a priori rejected by the materialist stance of science; nevertheless, it is worth reiterating that the foundation of both positivism and materialism is metaphysical in nature.

According to Frazer, philosophy, science and religion share the same reason for their very existence, i.e. the aspiration for knowledge and truth, where religions represent the huge, super-human effort to probe the great unsolved mysteries of life and death in a mostly unknown universe [44, Ch. 37]. Therefore, any friction between them does not depend on the quest for knowledge and truth but, rather, on the will of power and related imposition of dogmas, beliefs and social rules.

On psychological standpoint, religion has its foundation in religiosity, a mind faculty, etymologically stemming from the Latin *religare* (reunite, bind together); not surprisingly, the meaning of the term Yoga, stems from the Sanskrit term *yujir*, that has the same meaning [9,76]. Here, binding together indicates the reunion of mind and body, inner and outer worlds – i.e., reestablishing their inseparable interrelationship, the ordinary consciousness and the Ego (with their discriminant, dualistic stance and will of power) have inadvertently split. Religion, when cleansed of dogmas and doctrinal inflexibilities, must be regarded as a part of philosophy, a valuable matter of knowledge of highest human values [77, Ch. 1]. Likewise, the spirit is a still ill-defined faculty of the human mind, independent of any denomination, doctrine or theology. It may be regarded as a non-Ego-centered component of the human unconscious, latent but potentially accessible by consciousness in the process of individuation and development the Self up to the level of enlightenment [7], leading to the narrow, illusory egocentric perspective being overcome. The relevance of spirituality and religion in medicine have been reappraised by medicine in recent years and both WHO and World Psychiatric Association have recognized their relevance for mental health and quality of life [78].

The concept of sacred – meaning the opposite of profane – does not call for any theology and denomination as well. Its core meaning indicates all what deserves respect due to its profound truth and is too important to be altered or neglected. If this is the case, medicine remains a sacred profession: in fact, disease, suffering, disability and death are sacred aspect of life, a fact well enshrined in the Hippocratic oath and opening deep philosophical questions in palliative care [30]. This is the reason why ancient Greek medicine included procedures for purification, the aim of which was to get an integrity not diverted by interests of any kind. On the other hand, modern technical medicine has clouded this sacred aspect and inadvertently betrayed Hippocrates' teaching. Actually, it has led to patient being reified, his/her subjectivity being neglected, and the doctor-patient relationship being contractualized. At the same time, the disclosure of conflicts of interests has been introduced in conferences and renowned scientific journals in the attempt to prevent frauds: anyway, a dreary condition for science, that should aim to pure knowledge and truth. A recent very bad example is an article on the use of chloroquine in Covid-19, reporting fake data in order to claim no beneficial effects and severe adverse events based on an alleged multinational registry analysis on 96,032 patients [79]. The Lancet, following an independent third-party peer review, has fortunately retracted the article on June 4.

Perhaps, there is no rule and written document able to cancel out inappropriate behaviors and frauds springing from human foolishness. The problem is cultural and philosophical in nature and calls for reappraising and implementing the founding values and dignity of medical

profession – well established since the antiquity – as well as broadening the limits of the ruling materialist stance of mainstream medicine and smoothing the will of power.

### CONCLUSIONS

The history of hypnosis has been marked by its effectiveness paralleled by misunderstanding and prejudicial refusal, a problem endowed with huge epistemological implications [80,81]. Its ostensible oddity depended on the *Zeitgeist* (spirit of the times), dominated by the century-old rationalism of Western thought and the view of man as a monolithic creature beloved by God and endowed with a rational soul [82]. This naïve belief started collapsing in 19<sup>th</sup> century following the observation of multiple personalities, where the ostensibly odd phenomenology of hypnosis led to the unconscious life and its processes being recognized.

A glance to the whole history of philosophy and medicine lets one realize that the split between mind, body and environment, and their mechanistic conceptual fragmentation is a relatively recent phenomenon yielded by questionable historical-political-religious circumstances, rather than sound epistemological reasons. Then, the divorce between the Church and the new sciences was followed by the separation of science and philosophy in 18<sup>th</sup> century. These circumstances led to an ill-founded radical dualism, well defined by Severino as the cross the Western thought is hung on [50,51,59].

If the above discussion is correct, the whole history of medicine should be reappraised in order to recognize the cultural filters and flaws introduced and never again put under scrutiny. The great value of current medical science is undeniable, but its objectivist-reductionist approach has inadvertently led to patient's subjectivity being neglected and Hippocrates' teaching being inadvertently betrayed. His rational approach based on the concept of *dýnamis* is surprisingly modern and allows rejoining what in the modernity has been unduly split. This has relevant implications in clinical practice, where only a full-fledged reintroduction of subjectivity may allow for a proper understanding and wise management of patient's needs, as clearly shown by the wealth of available data on placebo and nocebo. This has also relevant clinical implication in the management of so-called Medical Unexplained Symptoms – including a heterogeneous group of functional and psychosomatic disorders, such as fibromyalgia, multiple chemical sensitivity, chronic fatigue syndrome, gulf war syndrome, chronic pelvic pain, non-bacterial cystitis, burning mouth syndrome etc. – with their high prevalence, chronic course, relevant disability and high direct and indirect costs [83–85].

Hypnosis may be regarded as the modern, scientific version of an essential healing technique permeating the whole history of medicine, allowing for patient's empowerment and giving him/her back an active role in the process of recovery through enhanced resilience and psychosomatic control [6,86][6,86]. It may be as effective as to allow for full analgesia and improve the overall outcome of surgery [81,87–90]. The same goals were pursued by incubation for over three thousand years in ancient Egypt and Greece; then, it was unduly deleted and reduced to a matter of miraculous healing void of any technical skill by the *Magna Ecclesia's* political-theocratic will. The relevance of patient's subjectivity in medical care had already been wisely defined by Hippocrates in his famous aphorism:

*It is more important to know what sort of person has a disease than to know what sort of disease a person has.*

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