

Article

# Psychopathology, Memory Editing, Talk Therapy: Philosophy of Medicine on the Body–Mind Frontier

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## Abstract

Medical history of psychopathology is, to some extent, the history of the overlapping traditions of Cartesian-Platonic dualism and physical reductionism looking for a taxonomic middle ground by means of diagnostic constructs. Building on such liminality, Freud first showed that traumatic memories could well be made of pure fantasy, a mind-only construct of experience, and still act traumatically on the patient's body. Under that sway, Freud and Janet came to intentionally modify their patients' memories to cure "hysterical" dysfunctional behaviours by means of hypnosis. The metaphorical practice of "writing new words in the human soul" has been adopted as a clinical device since the early days of psychotherapy, as the meaning of past experiences was clinically approached, verbally and emotionally negotiated, to remove somatic symptoms. Working on memory at the interdisciplinary level, we here show that what is nowadays referred to as the abstract mind, or psyche in medicine, is the historical precipitate of quite a unique cultural construction, resulting from the porous liminality between religious domain, philosophical theory and scientific method. We hereby address psychopathology, the philosophy of medicine and the frontiers between memory and fantasy—besides those between body and mind—to suggest how psychoanalysis can be considered more as a hermeneutic than as a science, or otherwise, how hermeneutics can be appreciated as a scientific, medical and therapeutic tool. Memory itself is addressed on the threshold between consciousness, organic life and intergenerational potential.

**Keywords:** history of medicine; psychology; epistemology; Freud; Janet; memory

## 1. Introduction

Those who see any difference between soul and body have neither.

Wilde (1906, p. 6)

If we wish to understand why the Berlin Wall fell, we should focus not on gravity,  
but on the downward causation of the human spirit's search for freedom.

Whitehead (2005, p. 649)

The sentence mentioned just above is a very intriguing statement by psychiatrist Clay Whitehead, which may suggest a wider question, like, could we possibly conceive a scientific understanding of the human's spirit search for freedom? And more, how can we scientifically consider the analysis of values, ideals or conjectures? Truly, social constructs and metaphysical entities are seldom on the radar of hard sciences—and maybe luckily so. However, a tremendous attempt has indeed been advanced in the history of science



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around the understanding of the soul, psyche, or mind. As we shall see below, twentieth century medicine has been particularly prolific on such matters.

The interactions between the scientific method and metaphors, the essence of memory, the body–mind problem and the historical construction of the concept of psyche are the occasion of this writing, whose purpose is to explore some twilight areas between philosophy and science through the history of psychoanalysis and dynamic psychology.

As we are not aiming to prove any particular point here, we hope it will not be too disappointing if this article lacks a proper conclusion. Instead, we will be opening up issues, providing a series of prompts and hints, leaving to each reader the freedom to make hers or his necessary connections to further develop certain reflections. In this sense, what we provide below may well be considered as an open-ended stream of ideas around the philosophy of the mind. Indeed, numerous better and very valuable studies on the history of psychopathology, including from multidisciplinary perspectives, have been published. Following the Poet, we are more proud of what we read than of what we write; we then hope that the quality of the works mentioned along this text, and the effort of showing the real-world implications of what might otherwise seem an abstract journey into conceptual concerns, may compensate for our lack of a rigorous line of reasoning, poorly hidden behind a division in sections. We are likewise aware of another relevant shortcoming of this paper, namely, its lack of novelty. In fact, the suspicion that nothing really new can actually be thought kept us from even trying to be original.

## 2. Princess Elisabeth and Meta-Psychology

To begin, let us recall Freud's meta-psychological assumptions (S. S. Freud 1984), based on the splitting of the mind from the brain, and their role in the life of psychoanalysis. As it is known, those assumptions were the key factor that made it possible for his theory of hysteria to keep on flourishing, in Europe and beyond, despite the original, unsolved problem of the missing lesion, that is, the acknowledgment of the absence of any plausible organic etiology for that illness. Those meta-psychological assumptions maintained the diagnostic construct alive long after its scientific dismissal, early proposed by the German doctor Armin Steyerthal in 1904 and later implemented by physician Joseph Babinski, who in 1908, in front of the Paris Neurological Society, delegitimized once and for all the nosological construct designed by his master, Jean-Martin Charcot. Long after Freud himself had dropped his studies on hysteria, the transition from the "hysterical body" to a "hysterical mind" extended the domain of medicine to the realm of the soul, or psyche, as a corollary of the metaphorical *petitio principii* assimilating physical disease and mental illness, united under the clinical gaze. Formulas like "hysterics suffer mainly from reminiscences" (Freud and Breuer [1895] 1956, p. 7) or "Hysteria is a collection of illnesses based on representation" (Strumpell, in Janet 1911, p. 415) provide an illustration of this transition, towards the scientific examination of the soul and its alleged sickness.

An epistemological assessment of this methodology calls into question the very congruence of the idea of mind in relation to the organicist model of medicine, as the human psyche represents a purely theoretical construct, as we shall see below, located well beyond the range of scientific observability. The leap of the concept of illness from the materialist perspective to the metaphysical domain, meaning the idea that the soul could get sick, allowed for the medical gaze to further develop the Freudian theory of conversion neurosis and opened new, unprecedented fields for medical research in the realms of imagination, language and meaning; it was the birth of psychoanalysis and dynamic psychology.

That same split, however, also aroused an ancient set of problems and contradictions that materialism alone could not solve, nor contemplate. The medical history of psychopathology in general, and of hysteria in particular, represents to some extent the his-

tory of the overlapping existences of Cartesian-Platonic dualism and physical reductionism looking for a taxonomic middle ground by means of diagnostic constructs. The first, and more general of such impasses was as old as the body–mind separation itself, and can be considered as a classic topic in the philosophy of medicine.

Notoriously presented to Descartes by his student Elisabeth von der Pfalz, princess of Bohemia, the aporia is still alive in contemporary medical models and does not seem to be willing to disappear anytime soon. Very early in her philosophical training, princess Elisabeth questioned her master about how the mind, lacking the quality of extension, could possibly be able to affect the body. Thus, she wrote in a letter dated 16 May 1643:

tell me please how the soul of a human being (it being only a thinking substance) can determine the bodily spirits and so bring about voluntary actions. For it seems that all determination of movement is made either by the impulsion of the thing moved, or it is pushed either by that which moves it or else by the particular qualities and shape of the surface of the latter. Physical contact is required for the first two conditions, extension for the third. You entirely exclude the one from the notion that you have of the soul, and the other appears to me incompatible with an immaterial thing. (in [Shapiro 1999](#), p. 505)

The princess' early observations were questioning Descartes' (Platonic) model of dualism, wondering how the soul and the body could possibly interact on a logical base. Princess Elisabeth foresaw a criticism which had already troubled Aristotle in the *De Anima* ([Aristotle 1984](#)): the problem of how interaction could occur between an incorporeal soul and a corporeal body. Medieval thinkers have also been concerned with that impasse. Twelfth-century theologian and mystic William of Saint-Thierry re-proposed the issue in his *De natura corporis et animae*, where he wrote that "the author of nature wishes the association and bond between the intellectual substance and the corporeal to be ineffable and beyond our comprehension". Saint-Thierry attributed the cause of such mystery to an intentional divine design and observed that "by the law of nature the incorporeal might neither exist within nor be held within the body, nor be encompassed by the body, nor be found outside it" (in [McGinn 1977](#), p. 130; see also [Agamben 1977](#)). Contemporary medicine admits a variation of this same impasse in the form of the methodological separation between psychotherapy and psychiatry as means of both depicting and dealing with dysfunctional behaviours, through pharmacology and talk therapy. While unprecedented advances have been recently made in the screening of brain activity, and while that of "Cartesianism" has become more and more an intellectual accusation and an easy attack among philosophers (see [Wood 2006](#)), the princess' concerns still remain unanswered, as a solution may require an alternative model to think about the human being, a model that would solve the "translational crisis" of contemporary psychiatry, a model we just do not have.

The same ancient mystery slipped through the history of medicine down to the contemporary definitions advanced by psychiatry's *Diagnostic and Statistical Manual of Mental Disorders* (DSM) to replace the dropped concept of hysteria; namely somatic symptom, dissociation and conversion disorders. All of those contemplate the hypothesis of the psychological origin of behavioural dysfunctions and somatic phenomena (psycho-genesis) and yet they are still oblivious of a plausible answer to the princess' puzzle, as they are still locating their assumptions precisely on the threshold between philosophy and science. In fact, there is still no physical model of the psyche able to sustain the concepts of Briquet, Janet or Freud. Freud himself tried to address the issue in his *Project for a Scientific Psychology*, with little profit [S. S. Freud \(\[1950\] 1954\)](#). Physical reductionism has been invoked to try to evade the issue. Yet, the location, the origin or the organic support of "hysterical" phenomena has never been found through the organicist model inherent to the bio-chemical medical paradigm. This limit is particularly evident in medical nosology, where a descrip-

tive categorical approach has long rested on the assumption that, over time, some kind of biomarkers would have come to justify and confirm otherwise unsubstantiated diagnostic constructs. Inconveniently, that never happened. The expected, desired biomarkers which were supposed to be coming in support of the descriptive, Kraepelian categorical approach never came to integrate diagnostic definitions of the DSM and ICD. On the contrary, several scientific claims about hormonal unbalance as biologically responsible for some DSM categories have boldly been discredited as pure myths (see [Fountoulakis and Tsapakis 2024](#); [Moncrieff et al. 2023](#)), together with a whole set of popularized diagnostic constructs that have been proven scientifically untenable, like bipolarism (see [Healy 2006](#)). In addition, persistence on the biological, genetic and organicist approach on such matters appears to have been much less beneficial for scientific understanding than economically profitable for the pharmaceutical capitalist agenda (see [Ghaemi 2009](#); [Moncrieff 2006](#)), which fostered for decades worrying forms of sanitary governmentality of human behaviours violating the most unalienable, basic human rights (see [Arbex 2013](#)). Yet, although the current paradigm has not been particularly beneficial to patients nor to doctors or society, new approaches and proposals have long been overlooked within the medical milieu, as “there are many resistances. Institute careers and neuropsychiatric reputations have been built on mastery of the old theories” ([Whitehead 2005](#), p. 652).

On the other side, an alternative psycho-socially oriented approach has also been missing an exhaustive solution to the princess’ enigma, leaving plenty of room for a comprehensible skepticism on part of the traditional hard sciences:

Unhappiness about biological psychiatry partly involves reaction to ‘evidence-based’ practice, used by pharmaceutical and insurance industries or national health plans to favour pharmacological over psychosocial interventions. The biopsychosocial model is seen as an antidote, yet it might equally be a cause, failing to provide convincing conceptual or empirical grounds to resist the biologisation of psychiatry. ([Ghaemi 2009](#), p. 3)

As traditional approaches have been proven unsatisfactory and alternative ones are overlooked, the epistemology of psychiatry seems to be doomed to stagnation between no longer and not yet, as a liminal arena, challenging both the mind and the body in the understanding of its clinical reality, which resists as evident as ungraspable. Biochemical observations may have provided neuroscientists with a descriptive model of the brain on the functional level, but still lack the analysis of symbolic systems, the meaning of emotions, and a computational model able to account for the translation of human experiences, feelings, words and thoughts into somatic phenomena. If it is clear, for instance, that damages and alterations on the cortical level have a direct impact on behaviour, language and cognition, it is equally clear that psychotherapy, that is, a discursive relation between people engaged in the re-signification of words, ideas, emotions, memories, representations, norms, values and symbols, also has observable, crucial somatic outcomes. On the same frontier, phenomena like the placebo effect or neuroplasticity therapies based on the regeneration of cell structures through cognition-focused intervention are as many examples of the irreducible relevance of such a liminal area (see [Marzola et al. 2023](#); [Hill et al. 2011](#)). As the logician can not avoid highlighting a contradiction between method and object in psychiatry, the threshold has so far resisted a clear-cut brain-mind separation and may deserve to be considered as a per se arena of investigation.

As a pioneering attempt to describe and address such liminality stands the 1915 work of Walter Bredford Cannon, *Bodily Changes in Pain, Hunger, Fear and Rage*, where great emotions were considered in their causal relation with the states of the nervous system (on this, see [Russell 1927](#)). Against materialism, and elaborating on what Bertrand Russell

called “the cognitive element” of emotions, we will argue that the entity of *meaning* plays a crucial role in that intertwined relation:

As every one knows, the adrenal glands secrete adrenin, which produces the bodily symptoms of fear or rage. On one occasion my dentist injected a considerable amount of this substance into my blood [. . .]. I turned pale and trembled, and my heart beat violently; the bodily symptoms of fear were present, as the books said they should be, but it was quite obvious to me that I was not actually feeling fear. I should have had the same bodily symptoms in the presence of a tyrant about to condemn me to death, but there would have been something extra which was absent when I was in the dentist’s chair. (Russell 1927, pp. 226–27)

This extra element, we argue, is meaning.

### 3. Memory, Fantasy and the Clinic

Indeed, it was not by chance that a neurologist had been destined to found psychoanalysis. Nerves, in fact, soon appeared as the biological interface of such a living threshold, embodying a liminal arena where societal norms (environment) and individual behaviour interact. They furthermore represent an inner frontier, the one between individual mind and social body. Freudian theory of neuroses gave plenty of room for the consideration of the interaction between our inner life and neurological issues. Following Pierre Janet, Freud drew the attention to the crucial relevance of “traumatic memory” in psychopathology, a metaphor adopted to describe the emergence of behavioural dysfunctions and somatic symptoms as a result of troubling experience. Freud himself, moreover, before abandoning the theory of hysteria, had the chance to observe that the sufferings presented by his patients sometimes originated from pure fantasy, thus discouraging radical materialism and organic reductionism from the aetiological scenario. In his *Introductory Lectures on Psycho-analysis*, he argued that traumatic memories could well be completely constructed images, meaning they could be made of pure fantasy, a mind-only construct of experience, and still act traumatically on the subject’s body, as if they had actually happened in the outer, inter-subjective world:

It remains a fact that the patient has created these phantasies for himself, and this fact is of scarcely less importance for his neurosis than if he had really experienced what the phantasies contain. The phantasies possess psychical as contrasted with material reality, and we gradually learn to understand that in the world of the neuroses it is psychical reality which is the decisive kind. (S. S. Freud 1981, vol. 16, p. 386)

Such an imaginary dynamic was not something new at the time of Freud. Aristotle was well aware of the fact that inner images can be produced even in the absence of sensations, for instance when we keep our eyes shut (see *De Anima* 428a). Edmund Husserl, in the same years of Freud, dedicated some attention to the intimate relations between memory and fantasy, conceiving the former as a creative, present act, re-presenting now historical events in a process that might modify the raw materials in the very act of recollection. Memory is there observed in the moment of remembering, thus considered as “a present act whose object appears as past” (Brough 1975, p. 41). We have already mentioned the idea of some “illnesses based on representation”. Husserl’s work *Phantasy, Image, Consciousness and Memory* provided some insights precisely on the formation of this dialectical image:

In memory, what I phantasy I believably posit in the past; in recollection, what is not now (which is inherent in all phantasy) re-presents a past. (Husserl 2005, p. 215)

[. . .] I have a modification of the event. And a phantasy modification. Hence one would certainly have to say that I have one in the other case as well. In the mem-

ory of the phantasy, the phantasy is the object of recollective re-presentation, and the phenomenon that recollects re-presentationally is the phantasy of a phantasy. (Husserl 2005, p. 228)

[. . .] The consciousness belonging to that time is ‘reproduced.’ [. . .] It hovers before me in the memory image, and I live in it in such a way that what I mean is its object. The ‘reproduction’ of the earlier perception, hence a modification of it, is present. I live in it, and this means that I am turned toward its object. ((Husserl 2005), p. 238)

Years later, in the wake of an analogous intuition, Borges (1964, p. 25) wrote about a metaphysician of Tlön, according to whom “the future has no other reality than a present hope, and the past is no more than present memory”. Such a fluid state of memory, bridging past and future, or even melting them, comes to highlight the relevance of standing precisely on this frontier instead of trying to dissolve it, as the activity on abstract memory finds a correlative materialization in the modifications of the physical body.

A different take is represented by the—still positivist—ideas of Russell. Willing to draw a clear line between memory and imagination, Russell wrote that:

Memory proper does not, like imagination, involve a re-arrangement of elements derived from past experience; on the contrary, it should restore such elements in the pattern in which they occurred. This is the vital difference between memory and imagination. (Russell 1927, p. 202)

Whether true or false, “memory”, he further wrote, “is more fundamental than imagination, [. . .] the latter consists merely of memories of different dates assembled together” (Russell 1927, p. 198).

Despite those differences, Freudian treatment of neuroses consisted of making conscious some of the unconscious, in order to give the patient the chance to “face the past”:

What we make use of must no doubt be the replacing of what is unconscious by what is conscious, the translation of what is unconscious into what is conscious. Yes, that is it. By carrying what is unconscious on into what is conscious, we lift the repressions, we remove the preconditions for the formation of symptoms, we transform the pathogenic conflict into a normal one for which it must be possible somehow to find a solution. (S. S. Freud 1981, vol. 16, p. 435)

The re-signification of memory in altered states of mind (hypnosis) proved to be a formidable healing tool. The reinterpretation of the past, the shared dialogical process of editing the meaning of experiences, has since then been the core of therapeutic, psychoanalytical relation, where meaning is defined by means of associations. Changing those associations changed the meaning of experiences. Curiously, that is also the focus of contemporary psychedelic medical treatment, a branch of psychotherapy recently revived after decades of ideological resistance in the US (see Pollan 2018).

Elsewhere in his work, S. S. Freud (1981, vol. 7, p. 18) paraphrased his purpose as follows: “whereas the practical aim of the treatment is to remove all possible symptoms and to replace them by conscious thoughts, we may regard it as a second and theoretical aim to repair all the damages to the patient’s memory”. Then came the discovery that a purely symbolical work, a dialogue between therapist and patient, was capable of producing somatic outcomes, possibly resulting in the disappearance of symptoms and behavioural dysfunctions by means of talk therapy. In France, Pierre Janet had already worked for years in the same direction. The abstract entity of the meaning of past experiences was modified, verbally and emotionally negotiated with the patient to remove somatic symptoms:

It can be proved that the disturbances developed only after these experiences and the memories they left. At the present time the symptoms can be provoked by recalling the memory of the corresponding experience. By modifying the memory, by various procedures, the disappearance or the modification of the corresponding physiological symptom can be brought about. (Janet 1914–1915, p. 4)

“By various procedures”, wrote Janet. The range of the frontier extending between body and mind can in fact be stretched, and has been stretched, to embrace quite a delicate ethical dimension. Where is, in fact, the border between cooperative modification and open manipulation? The truth is that both Freud and Janet were engaged in a process of memory manipulation for good purpose—the treatment. However, where Sigmund Freud was working to make conscious the unconscious, Pierre Janet would sometimes act below the surface of awareness, provoking memorial modifications within the hypnotic state. Janet would there create “false memories” in an altered state of consciousness, asking the patient to modify the representation of the event during the hypnotic treatment (on this, see Hacking 1995). Two clinical cases of “hysterics”, taken from his *Psychological Automatism* (1889) and *Psychoanalysis* (1914), seem crucial to illustrate the potential of this twilight zone, where the assumptions of a sharp body–mind split have been ultimately cornered by medical clinical practice. The first describes the case of Marie, while the second patient’s name is not disclosed by Janet:

She had been forced, despite her cries, to sleep with a child of her age who had strangles all over the left side of his face. Marie had, some time after, plates of strangles which appeared almost identical and which sat in the same place; these plaques reappeared several years at the same time, then healed, but no attention was paid that from that moment on she was anesthetic on the face on the left side and blind in the left eye. (. . .) Same attempt as before for healing. I bring her back with the child she detests, I make her believe that the child is very nice and does not have the strangles, she is only half convinced of it. After two rehearsals of the scene, I win my case and she fearlessly caresses the imaginary child. The tenderness on the left side reappears without difficulty, and when I wake her up, Marie sees clearly with her left eye. (Janet 1889, pp. 439–40)

A young woman, twenty-five years of age, has had for six years a series of varied disturbances; cutaneous and visceral anesthetics, attacks of meteorism, digestive troubles, contracture of the legs, and severe astasia-abasia which for five years made walking impossible. The patient in hypnosis revealed a sad episode in her early life. She lived alone with her father and when she was eighteen she became his mistress, this relation continuing for one year. Hysterical disturbances occurred soon after. I was able to demonstrate the close relation between all the hysterical symptoms and the memory of this culpable relation with her father and the fear of its consequences; by modifying the fixed idea I was able to suppress all the hysterical disturbances, which sufficiently justified the theory of their origin. (Janet 1914–1915, p. 5)

Memory was there modified as a storytelling practice, by which means Janet wanted to cure his patients, not prove a meta-psychological truth. “Janet had no compunction about lying to his patients,” wrote Hacking (1995, p. 296), “and creating false memories through which they could deal with their distress. Truth was not, for him, an absolute value”.

The idea was not totally new. In the pages of Plato’s *Philebus*, Socrates admits a metaphor of memory as a text, which is written in our soul: “if memory and perceptions concur with other impressions at a particular occasion, then they seem to me to inscribe words in our soul”. He also admits that this written text can be false, as he

further observes: “But if what our scribe writes is false, then the result will be the opposite of the truth” (Plato 1997, p. 39a). As seen above, precisely the metaphorical practice of “writing new words in the human soul” has been adopted as a clinical device since the early days of psychotherapy. As for the distinction between true and false, that remains a slippery ground:

Freud was the exact opposite of Janet. His patients had to face up to the truth—as he saw it. (...) Freud got patients to believe things about themselves that were false, things that were often so bizarre that only the most devout theorizer could propose them in the first place. But there is no evidence that Freud systematically, as a method of therapy, got his patients to believe what he himself knew to be lies. Janet fooled his patients; Freud fooled himself. (Hacking 1995, p. 196)

The ethical evaluation of such choices between truth and falsehood in the clinical context goes beyond our purposes here; yet, what was new in that historic scenario was the fact that intentionally modified memories were being used as a therapeutic tool to cure bodily symptoms and dysfunctional behaviours. Memory comes then to represent a substantial ground for our liminal explorations. The power of such a frontier and its pivotal function both in therapy and in scientific knowledge is still surprising and it is only matched by its elusiveness. Equally intriguing is the way the very concept of the psyche survived the evolution of scientific realism to this day. A modified version of the religious concept of the soul has in fact become a crucial tenet of medical scientific approach.

#### 4. Making Up the Psyche

Under the scientific gaze, we were saying the psyche represents a purely hypothetical construct, an explanatory principle like the ones of gravity, life or instinct in the history of the sciences (see Foucault and Chomsky 2011; Bateson 1972; Quine 1953). It is a traditional tool imported, inherited and taken on board without much examination, whose function within scientific understanding is to help maintain a paradigm at work in lack of a better construct. We hence acknowledge that, among the conditions of existence of the medical (bio-chemical) model, the reality of the soul must still be listed, that is, we have to admit that a metaphysical reference is an integral, structural and unavoidable cornerstone of the modern and contemporary Western medical and scientific research program, so much so that, in the absence of a purely organic correspondence, the unverifiable belief of the psyche, and its assigned “laws”, has progressively become the religious cornerstone of the scientific approach dedicated to dysfunctional behaviours once defined as “hysterical”, and nowadays regarded as somatic symptom, conversion, dissociation disorders. Despite this recent redefinition and relabeling, here as well psychogenesis remains a conventional assumption, as the computational mechanisms underlying the psychopathological symptoms have not been adequately described yet in psychiatry (on this see Northoff et al. 2023). Moreover, those multiplied nosological categories do not really reflect a concrete advance in research, as they have actually been reprised from the old theories of Janet (dissociation/disaggregation), Briquet (somatization) and Freud himself (hysterical conversion), still representing very questionable psychoanalytic notions.

In addition, taxonomic reliability itself is still very controversial in psychiatry, as mentioned above. Although this is not an essay on the critique of the epistemology of psychiatry, it is important to observe that some scholars recently argued that the DSM is just 95.2% false (see Ghaemi 2013, 2023). Other critics of the DSM diagnostic model have further calculated that there are more than ten million possible symptom profiles, and near two million ways to present with psychiatric symptoms, and yet not meet diagnostic criteria (see Borgogna et al. 2023). This has partially been ascribed to the lack of a rigorous theoretical model to describe subjective and intersubjective experience, the so-called “trans-

lational crisis” of contemporary psychiatry, partially to the low standard of scientificity proper to this taxonomic model based on a social ontology. The cultural construction of this social ontology, its progressive absorption by the scientific model, and the intertwined history of philosophy and medicine, better belong to our purposes here.

In fact, the history of the Western concept of mind is also the history of its progressive coincidence with neurological knowledge, slowly undermining its metaphysical roots. The theoretical construct of the psyche, taken on board by scientific realism, is also the result of a deep historical reappraisal. Indeed, the alleged objectivity of the categories through which Western psychology operates, which motivates its claims of scientificity, does not necessarily represent a reflection of how nature built up the psychological apparatus, but rather the cultural naturalization of a relative set of concepts, conventionally accepted as real. How can one establish that the Freudian psychoanalytical model is more accurate than Adler’s individual psychology? Is the unconscious a place, like seen by Freud, or is it structured like language, as described by Lacan? Will, the passions, psyche, emotions, nous, intelligence, phronesis or reason have all been but conventional entities, whose reality and reciprocal relations were subject to historic, cultural construction. In this sense, Indonesian, Chinese and African traditional definitions of the mind, of intelligence and of the self, represent as many plausible constructs based on different sets of conventions. The identification of psychological entities and phenomena largely depends on the conceptual apparatus historically put in place, enabling us to name and recognize objects and processes one then claims to be observable. But neither those entities nor their structure are to be considered as objective. Psychologist Kurt Danziger once observed that while the Western concept of intelligence implies, for instance, the notion of speed, or rapidity of calculation, the Ugandan traditional definition of intelligence includes features like prudence and caution, which involve slowness, and considers speed as a negative, undesirable trait of a person’s character (see [Danziger 1997](#)). Similarly, the Indonesian concept of *djiwa*, something analogous to the self, or psyche, integrates the legacy of a Hindu-Javanese religious set of beliefs about the human being and the world, which structures a quite different framework of methodologies, deployed in the study of academic psychology in universities. There, “various forms of meditational and ascetic practices could be employed to produce specific psychological phenomena as reliably—and perhaps more reliably—as many of our psychological experiments” ([Danziger 1997](#), p. 2). In this sense, the clinical use of hypnosis by Breuer, Freud and Janet can be considered as the Western counterpart of such meditational and ascetic practices, on which base conclusions are drawn about human beings, their mind and their nature under the metaphor of “laws”. To some extent, when the researcher produces practical results, those are generated on the basis of the conventional set of preconceptions one is committed to. Therefore, as several cultural traditions carved up the understanding of psychological phenomena in their own different ways, it may be relevant to briefly reconsider the life of the body–mind relation in the history of our specific concept of the mind, or psyche, as “continuity must be rigorously demonstrated rather than assumed” ([Danziger 1997](#), p. 22).

The meta-psychological assumptions defining the structure of contemporary psychoanalysis are by no means more scientific than its Greek, Christian and Hebrew predecessor, suggesting that psychoanalysis is to be considered more as a hermeneutic than as a medical science (on this, see [Steele 1979](#)). This is true for both the structure of the mind and for the “laws” allegedly governing its functions. In 1937, Anna Freud identified and named 10 “defence mechanisms”, which are supposedly at work in every human mind ([A. Freud 1937](#)). Later, [Blackman \(2003\)](#) somehow numbered 101 of such mechanisms. It is surprising how many entities theorists can discover when their discipline does not require them to support claims with real empirical data. Indeed, what is really interesting is that the very

roots of such a martial-mechanical metaphor, the one of “defence mechanism”, are more assumed than deducted, and its inference, function and purposes could deserve dedicated research as part of a wicked narrative about the world. With a broader take, such research could argue around the very metaphorical relations between entities in scientific theories, be it natural “law”, economic “growth” or black “hole”, let alone “defence mechanisms”.

For our purposes here, we rather wish to highlight that what is nowadays referred to as the abstract mind, or psyche, generally meaning a non-observable, unmeasurable, mass-less entity from which emotions, reasoning, feelings, logical thinking, memories and intuitions originate (or by which is originated), is the precipitate of quite a unique historical construction, resulting from the porous liminality between religious domain and scientific method. Western beliefs on brain, soul, mind and their respective relations and properties, had in fact assumed various meanings before they could cross paths with the scientific revolution to take their current locations within the body–mind structure. By that time, the concept of psyche had already undergone a Platonic shift, thus becoming a personal (immortal) soul that joins the body to create the human being. However, the early stages of the history of the mind show a more nuanced relation with the physical body. And a caution: we should never be misled by an alleged continuity represented by the shortcuts to ancient Greece, supported by naive beliefs about neutral translations:

when they were translated from Greek into Latin and from Latin into various modern languages, the categories employed by Aristotle and his compatriots profoundly changed their meaning, not to speak of the changes that occurred within one language over the centuries. Thus, Aristotle’s psyche is not the anima of his Latin translators, and even less is it the soul of the Middle Ages, let alone the mind of the moderns. (Danziger 1997, p. 21)

Far from being a direct descendant of Greek philosophy, the idea of the mind is the result of a long interaction among disciplines and authors. Let us then take a closer look to the continuities and discontinuities of such categories on a historical base, since the modern psychological lexicon derived its conceptions precisely from preexisting physiological models, as well as through the physicians’ reading of philosophical theories.

As argued by Maxwell Bennett, the invention of our concept of psyche likely derives from the contact between the Greek culture and some animistic and shamanistic traditions via the Black Sea in the 8th century BC. Based on what he generally refers to as “shamanic religions”, a category retrieved from his readings of Sir James Frazer, he suggests that such traditions were well aware of the existence of a spiritual entity animating the physical body, a presence inferred by the phenomenon of dreaming. “Homer” writes Bennett (2007, p. 944), “refers to this spirit as the soul or psyche, peculiar to the individual and located in the head, but without the individual’s psychological attributes for remembering, thinking, perceiving, and feeling”. As noted by Schopenhauer (2019, vol. 2, p. 270): “By psyche the Greeks appear primarily and originally to have meant vital force, the life-giving principle, whereby it was at once felt that it must be some thing metaphysical, consequently something that would not be touched by death”. However, “if we read Homeric and other ancient texts attentively we will be struck by the absence of references to the internal mental states of characters” (Danziger 1997, p. 24), a trait we would nowadays assume as an undeniable part of the psychological structure.

Several meta-psychological assumptions were available in ancient history to define the “anatomy”, the “morphology” and the “physiology” of the spiritual centre of human inner life. The Greek writers we call Homer established that a soul consisted of three parts: the *thymos* (source of the emotions, urging to act), the *nous* (one’s intellectual activities and an absorber of images) and the *menos* (related to martial rage). Not all of them were considered to be mortal: the *nous* and the *menos* would die immediately with the body,

whereas the *thymos* was “breathed out from the chest at death to escape the decay of the body” (Bennett 2007, p. 945). This last feature is particularly interesting on the topic of continuity and discontinuity among traditions. There, indeed, a very physical act, namely the action of breathing, comes to connect a spiritual entity and an activity of the organism. It further joins the Greek and the Hebrew conceptions of the vital force. In fact, what the Greek language indicates with the word *thymos* is a property also described by the Hebrew *nephesh* (“the breath of life”). The word *nephesh*, spread all across the Bible, expresses a mode of sentience defining the property of living, a condition described as common to human beings and animals, but not to plants and bugs. Despite the fact that *psyche* and *soul* are the terms adopted by the common Greek and Christian translations for the word *nephesh* in the original Torah, a crucial divergence exists; in the latter, rather than *having a nephesh*, a creature *is a nephesh* (on this, see Alter 2018).

Elsewhere in the Greek tradition, some other significant discontinuities have to be taken into account:

‘Psyche’, or soul, [...] was something that a tree or even a magnetic substance could have. This means that we run the risk of seriously misinterpreting classical Greek texts if we simply assume without more ado that they constitute a discourse about ‘the self’, as that term is understood today. (Danziger 1997, p. 24)

In the Greek world, after death a ghost-like psyche would make its way to Hades. However, the *thymos* was the component able to confer unique psychological attributes on a person, and since “the souls of the dead do not possess a *thymos*, *nous* or *menos*, are incapable of speech” (Bennett 2007, p. 945). Freud’s meta-psychological tripartition among the *id*, *ego* and *superego* as three distinct, interacting agents in the psychic apparatus is not less unprovable, and not more likely to correspond to the world, than the Greeks’ narrative. In fact, nothing would prevent contemporary psychology from being rather named as thymology. It is anthropologically interesting, however, that some kind of logical or analogical pattern seems to impose to those thinkers a precise division of entities into three parts and not, let us say, into 7,4 elements as the components of the soul. Such a pattern does not quite seem to agree with the habits of the universe.

Nonetheless, Aristotle’s vision as well distinguishes three different kinds of soul: the *De Anima* mentions a rational soul, a sensitive soul and a nutritive soul, all considered as powers or capacities, not as substances. Again, a privileged position is unconditionally given to human beings, as the first soul was unique to humans, while the others were possessed by all animals. As the psyche took on a more personalized form, intelligence and the emotional life started to be considered as depending on it. Plato further maintained the tripartite composition of the soul, with the significant difference that, with him, all of the parts were considered as made of an immortal, incorporeal substance:

Plato’s dualistic philosophy of a corporeal body and an incorporeal immortal soul had a major effect on the Neoplatonists and via St Augustine came to dominate all Christian thought. Platonic dualism became the most natural conception for popular Christianity and it was this dualism that was to become a characteristic of the Renaissance form of Neoplatonism. Plato introduced the word mind for the *logos* soul, that is, the part of the soul concerned with reason. (Bennett 2007, p. 946)

After Galen’s ventricular doctrine, Descartes finally departed from both Aristotle and Platonism to codify the theory that has survived to the present day. In the *Principles of Philosophy*, Descartes held that perception, nutrition, locomotion, growth and reproduction were all functions of the body, a body common to all animals and subject to purely mechanistic interpretation. Only reasoning was left as part of the abstract, immortal mind,

separable from the body and including consciousness, willing, imagining, and sensory awareness. Elsewhere, Descartes also modified the classical doctrine of the passions:

Descartes' *The Passions of the Soul*, published in 1649, is notable for its total separation of soul and body and its mechanistic view of the latter. That radicalizes the existing tendency to make the body responsible for the passions. The latter are now simply experiences of the soul caused by the body. A new opposition comes to define the passions. The 'passions of the soul', originating in the body, are now distinguished from the 'actions of the soul', which depend solely on the soul itself and owe nothing to the body. [...] Note that passions now have causes. There is a hypothetical chain of physical causes and effects within the body involved in their generation. (Danziger 1997, pp. 33–34)

Those "passions" have later been absorbed in the category of emotions, particularly in the work of David Hume, where *emotions* were an offshoot of the concept of *motions*, used to describe physical and social animation. By analogy, they came to describe mental agitation as well. Hume, like all eighteenth-century moral philosophers, was working under the influence of Newton, who had established that the order of the universe was mathematical and mechanical. Accordingly, Hume further modified the ideas of intelligence and reason, which became an exercise in calculation:

[Reason] has now become instrumental, employed in the service of calm desire. From being the master it has become the servant. This reversal is celebrated in Hume's famous dictum that reason is and ought only to be the slave of the passions. Reason can no longer act with the force of will, because the determinants of human conduct are now seen in terms fashioned after Newtonian natural philosophy. Hume was a convinced determinist. Human action, he claimed, resulted from the workings of a mental machinery that followed regular and predictable patterns. There was no difference in principle between causality in the physical sphere and causality in the mental sphere. (Danziger 1997, p. 44)

Human agency has barely any room left in such a scenario, where individuals act under predictable causality. Later, the *will*, a category so central in Schopenhauer that it surged to the status of explicative principle, has also slowly been reduced to a mere vehicle for the transmission of mental impulses to the motor apparatus.

The functioning of reasoning and the mechanisms of the physical body had already gotten closer and closer, as an unprecedented investigation into the anatomy of the brain and the cortex had started in the seventeenth century. Anatomist Thomas Willis focused his attention on the relationship between the structure of the cortex and the ability of animals, including humans, to express their psychological capacities (Bennett 2007, p. 951). "Descartes believed that animals have no minds, but are merely complicated automata", wrote Russell (1927, p. 9). "Eighteenth-century materialists extended this doctrine to men". Later, the works of Pavlov, Kraepelin, Broca and Alzheimer further proved the connection between human behaviours and the activity, function and cell degeneration of the cortex (Pavlov 1921, 1928; Kraepelin [1904] 1968; Broca 1861; Alzheimer 1995). The machinery of the body progressively came to be held responsible for the psychological capacities of human beings once attributed to the soul or psyche. After neurology had been established as a proper academic discipline by Charcot, the instances which did not fall under a straight neurological domain were gradually left to the grey area of psychiatry. As seen, contemporary psychiatry as well tried to solve the issue from the perspective of reduction of mental processes to physical and chemical principles, largely influenced by pharmaceutical neoliberal agendas (see Moncrieff et al. 2023; Moncrieff 2006). Yet, the progressive reduction of the soul to a mechanic entity, where thoughts, memories and emotions are supposed

to be describable as equivalent to bio-chemical and electric signals, thus obedient to the laws of physics (or quantum physics), still leaves widely unanswered the basic questions related to the action of the mind on the body. The issue remains open, especially since, oriented by Wittgenstein, one can not consider the brain as a logically appropriate subject for psychological predicates, as it is not the brain which has a mind, but rather a living human being (see *Philosophical Investigations*, Wittgenstein 1958, § 412, 427). Despite the progressive attempt to de-materialize and re-materialize the psyche, forcing reality to take sides within a dichotomous model, each side of the polarization inextricably involves and excludes the other focal point in an unsettled, elusive tension. The question may not be just a matter of waiting for an inevitable integration of the mind into organicism; it may regard the limits of the theoretical model itself.

Theoretically, in fact, once body and mind are conceived as separated entities, the reconciliation through a form of monism is hardly achievable. Basic logical-mathematical reasoning stands up to the reunification, even under the most refined dual-aspect monist kind, as claimed by Whitehead:

A mathematized argument may also be helpful. Thus, body, B, and mind, M, are different:  $B \neq M$ . If we deny this, we have a mereological error. However, it is asserted that  $B = \text{“myself,”}$  and  $M = \text{“myself,”}$  and thus  $B = M$ , thereby contradicting the first assumption and committing a mereological error. Regrettably, we must conclude that even the ingenious dual-aspect monist effort at understanding the mind/body split is deficient. (Whitehead 2005, pp. 641–42)

A further exploration of mathematical set-theory relations may proceed beyond identity ( $=$ ), following more interactions like belonging ( $\in$ ), inclusion ( $\subseteq$ ) intersection ( $\cap$ ), etc., and would probably suggest even more strongly the subordination of the mind to the brain. Following this historical pattern, contemporary scientific research seems to be heading towards that direction.

Although holding that consciousness is not computational, Roger Penrose's studies on consciousness are precisely related to microtubules activity within brain neurons and suggest that a physical process named "Orchestrated Objective Reduction" evokes human consciousness, leaving however still untouched both the mystery of what consciousness really is and the enigmatic status of individual, personal psychological entities (see Hameroff and Penrose 2014). Schopenhauer (2019, vol. 2, p. 526) had a similar idea when he wrote that "consciousness has always shown itself to me not as cause, but rather as product and result of organic life, [...] therefore always made its appearance as effect, never as cause of organic life". In other words, Penrose's model marks one more step in the history of scientific material reductionism of the soul but still does not explain how exactly Pierre Janet's case of Marie's therapeutic healing is possible.

Another materialist solution to the body–mind problem has also been proposed by Quine (1953, 1960), among others. Despite being a materialist, Quine had no problem admitting that scientific inquiry does embrace abstract entities among its research tools, entities such as numbers or functions. However, he argued that metaphysical entities like the mind should be dropped in order to avoid the well-known set of unsolvable problems which are inextricably connected to the body–mind issue. Quine therefore denies the relevance of the mind and proposes to consider only behaviour itself as the plausible object of scientific observability, an approach that does not imply recourse to the soul as required by the Cartesian scheme. Such a perspective has been called by its opponents as a "devastating reductio ad absurdum of the Cartesian conception of mind", as representing "the lunatic thought that psychological science must ignore the mental entirely and instead treat solely of the externally observable physiological processes and bodily behavior of human organisms" (Wood 2006, p. 7).

Despite being a marginal current in medicine, phenomenological psychiatry presents a distinctive way to deal with the body–mind problem, focusing on the first-person account of lived experience as a new behavioural candidate for the status of biomarker. And that without ignoring the notions of mind and meaning. In fact, it is precisely when we consider behaviours as biomarkers that attributions about their meaning and the interpretation of human body become paramount. What is a behaviour? What does a behaviour mean? Is it a sign of something else (a symptom)? May it be a disturbance itself? The profound ambiguity which resides in the history of dissociation (once a status, then a symptom, finally a disturbance) illustrates the relevance of this debate. Or are behaviours something else, something like messages? The anthropological theory of embodiment (Csordas 1990) and the concepts of the “crisis of the presence” (De Martino 1961) or “crisis of subjectivity” (Northoff et al. 2023) may represent a significant theoretical and methodological bridge able to fill the gap left by the meta-psychological brain–mind split. A crucial difference still deserves consideration. Quite radically, Quine (1953, p. 12) argued that “the explanatory value of special and irreducible intermediary entities called meanings is surely illusory”. Thinking about phenomenology, and about the dentist of Bertrand Russell, the attribution of meanings to such entities seems to be a pivotal part of therapy and requires a semiology of behaviours that inevitably rests upon the body–mind threshold. On our part, we have argued above on how crucial the entity of meaning can be for the understanding of psychology and psychopathology.

Schopenhauer, anticipating Quine, argued that the concept of soul should definitely be dropped by philosophical reasoning, but could play a role in medicine nonetheless:

the concept of a soul is not only, as is established by the *Critique of Pure Reason*, inadmissible as a transcendent hypostasis, but rather becomes the source of unsalvable errors by the fact that it posits [...] an indivisible unity of cognizance and will, the separation of which is in fact the path to truth. That concept may therefore no longer play a role in philosophy, but rather is to be left to German doctors and physiologists. (Schopenhauer 2019, vol. 2, p. 225)

## 5. Embodied Memory, Metamorphosis, Inheritance

We have been warning that a fair conclusion would not come to properly seal this writing. Let us then end this quite undisciplined stream of associations by providing some further prompts, this time concerning the embodiment and retention of memory in the natural sciences, hereby illustrated with some amazing data coming from the fields of biology and entomology, that is, shifting the focus beyond the analysis of solely human beings.

In the lines above, we have often crossed paths with Bertrand Russell’s *An Outline of Philosophy*. Yet, we have so far been missing some of the most disruptive ideas included in that work. Let us then take in consideration a few more of his reflections on memory and the mind. In that same book, Russell scientifically considered that memory, in some of its forms, is “a consequence of the law of conditioned reflexes, which is at least as much physiological as psychological, and characterizes living tissue rather than mind” (Russell 1927, p. 291). He further argued that “in a completed science, the word ‘mind’ and the word ‘matter’ would both disappear, and would be replaced by causal laws concerning ‘events’” (Russell 1927, p. 292). Then, when it came to redefine what is the mind in relation with those events, he wrote that “a mind must be a group of mental events, since we have rejected the view that it is a single simple entity such as the ego was formerly supposed to be” (Russell 1927, p. 296). Following the steps of David Hume, who denied the existence of the Self, Russell observes that, in psychology, “the ‘ego’ has disappeared as an ultimate conception, and the unity of a personality has become a peculiar causal nexus among a series of events” (p. 254). Accordingly, a whole person as well is there considered not as

a single entity, but as a series of events, linked together by peculiar causal laws (p. 258). Finally, with the absolute freedom of a true visionary, he argued that

there are other possibilities which must be considered. It may be that each cell in the body has its own mental life, and that only selections from these mental lives go to make up the life which we regard as ours. (Russell 1927, p. 299)

As seen above, traditionally in the natural sciences memory has been considered in its close relation with the brain. Recently, some amazing studies in neuroscience have been showing how everyday experience and learning may translate into brain matter, and quite literally. Landmark studies have been dedicated to taxi drivers and bus drivers in London (UK) (see Griesbauer et al. 2022; Maguire et al. 2000, 2006). There, it has been found that, compared with bus drivers, taxi drivers had greater grey matter volume in mid-posterior hippocampi and less volume in anterior hippocampi. Results showed that years of navigation experience correlated with hippocampal grey matter volume only in taxi drivers, who had to memorize the entire city map and its connections instead of a series of fixed routes. Spatial knowledge has then been associated with the pattern of hippocampal grey matter volume in taxi drivers, who have to learn some 320 routes, 25,000 streets and 20,000 landmarks and places of interest in the city, together with their possible connections to meet the needs of their clients. In this sense, memory, cognition and experience have been directly connected with brain matter in humans. On the other hand, amazing studies on memory retention in entomology have also been suggesting that Russell's intuition might be equally accurate. Some most surprising studies conducted on insects (see Webster 2014, 2025; Blackiston et al. 2008) revealed that a caterpillar can have an experience, enter the state of chrysalis, emerge as a different organism after having turned into a "soup of cells" and still recall memories and experiences from its previous life as a caterpillar. Prof. Martha Weiss, from Georgetown University, argued that *Manduca sexta larvae* can learn to associate odour cues with an aversive stimulus, and that this memory persists undiminished across two larval moults, as well as into adulthood. This study provided the first definitive demonstration that associative memory survives metamorphosis in Lepidoptera. Furthermore, the results suggest the idea that retention of memory could be due to the persistence into adulthood of intact larval synaptic connections. But scientific findings regarding insects and memory retention do not stop there. A few years ago, Japanese 12-year-old Jo Nagai, second-grade student from Ibuki Higashi Elementary School, probably one of the youngest scientists ever, studied swallowtail butterflies for three years, replicated the groundbreaking experiment of Blackiston et al., and found their same results in a whole new species (see Webster 2025). In September 2022, Nagai presented his research to scientists at Shinshu University, then at Tsukuba University and Saga University. In the spring of 2023, he also decided to study if caterpillar children could remember events that had happened to their parents. He therefore tested a second generation, to see if they avoided the same smell he would train their parents to hate. A few months later, the results were clear; Nagai was able to show that butterflies had passed their memories on to their children, with statistically significant results.

The ontological implications of such discoveries for the understanding of memory in philosophy, psychology and biology are just paramount, disclosing unprecedented thresholds around the definition of consciousness, mind and memory even beyond the most audacious theorizations of Carl Gustav Jung. If we follow Russell when he states that he is conscious when he remembers, and, in particular that: "to say that I am 'conscious' of an event is to say that I recollect it, at any rate for a short time after it has happened" (Russell 1927, p. 299), such scientific evidence may eventually lead us to attribute consciousness to all sorts of living beings, natural elements and their cells well beyond the brain, beyond metamorphosis and even beyond our organic individual lifetime. We would then have

to philosophically and scientifically address something like afterlife memory, as well as prelife memory editing.

Let us stop here.

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