

**HYSTERIA(S). EPISTEMOLOGICAL STUDY
ON THE VALIDITY CONTEXTS OF SCIENTIFIC STATEMENTS**

Moreno Paulon

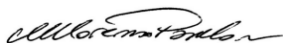
Doctoral Thesis in Philosophy

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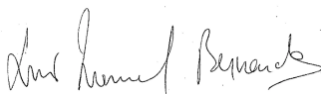


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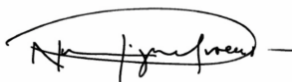


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To the memory of
Giorgio Antonucci

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RESUMO

Este trabalho aborda o tema da historicidade da verdade científica por meio de uma análise dos contextos de validade e dos critérios de validação das afirmações e das teorias promovidas por uma comunidade epistémica, nomeadamente a da comunidade psiquiátrica.

A partir de uma revisão histórica da criação, evolução e eliminação da categoria nosológica de histeria do catálogo americano das doenças psiquiátricas do DSM (*Diagnostic and Statistical Manual of Mental Disorders*), o estudo propõe uma investigação epistemológica das condições de existência desse termo e dos seus significados na tradição médico-científica.

Tomando como base as provocações e as propóstas do psiquiatra Thomas Szasz na obra *The Myth of Mental Illness*, discute-se o estatuto científico ou pseudo-científico tanto da histeria como dos seus principais substitutos contemporâneos: somatic symptom disorder, conversion disorder e dissociative identity disorder. As teorias de Karl Popper, Thomas Kuhn, Imre Lakatos e Paul Feyerabend, entre outros, servem como fio condutor para orientar a pesquisa acerca da questão da demarcação entre ciência e pseudo-ciência aplicada à histeria no interior da história da medicina.

A definição taxonomica médico-psiquiátrica é abordada no seu estatuto limiar entre construção social e objectivação científica, entre ambição materialista e premissas metafísicas, isto é: entre ciência e filosofia. Avaliando as dinâmicas de concorrência entre pares envolvidas na eleição de uma definição factual entre as várias posições teóricas dos médicos, expõe-se ademais a componente política que leva a definir a objectividade dos factos científicos. Considerando ainda a eliminação da categoria nosológica de histeria dos objectos que pertencem ao realismo científico, discute-se a pertinência da sua inclusão entre os casos de Justified False Beliefs com base na epistemologia social.

Por fim, propõe-se o exame de alguns limiares teóricos e disciplinares como áreas privilegiadas de mudança de paradigma científico, sem pretender resolver a tensão entre pólos de atração-repulsão. Neste respeito, a distinção entre mente e corpo (entre psicologia e psiquiatria) é observada nos seus momentos de sobreposição, interligação e crise; a análise simbólica da memória por meio da terapia de fala é investigada nas suas formas físico-corporais; a vida das metáforas é indicada como ligante estrutural das teorias científicas; os comportamentos humanos são considerados entre fisiologia médica e teoria semiológica definindo a *corporeidade* como lugar de negociação de significados inter-subjectivos. Nesta leitura, os trabalhos de Sigmund Freud e Pierre Janet, Jacques Lacan e Thomas Szasz, Ludwig Binswanger e Thomas Csordas estabelecem-se como pontos de contacto entre filosofia, antropologia e psicologia.

PALAVRAS-CHAVE: Epistemologia, Filosofia da ciência, Questão da demarcação, Karl Popper, Psiquiatria, Psicologia.

ABSTRACT

This work addresses the theme of the historicity of scientific truth through an analysis of the contexts of validity and the validation criteria of statements and theories promoted by an epistemic community, namely the psychiatric community.

Based on a historical review of the creation, evolution and elimination of the nosological category of hysteria in the DSM (*Diagnostic and Statistical Manual of Mental Disorders*), the American catalogue of psychiatric illnesses, the study proposes an epistemological investigation of the conditions of existence of this entity and its meanings in the medical-scientific tradition.

Taking as a basis the provocations and proposals of psychiatrist Thomas Szasz in his work *The Myth of Mental Illness*, the scientific or pseudo-scientific status of both hysteria and its main contemporary substitutes is discussed. The theories of Karl Popper, Thomas Kuhn, Imre Lakatos and Paul Feyerabend, among others, serve as a leading thread to guide research on the issue of the demarcation between science and pseudo-science applied to hysteria within the history of medicine.

The medical-psychiatric taxonomic definition is approached in its threshold status between social construction and scientific objectification, between materialist ambition and metaphysical premises, that is: between science and philosophy. By assessing the dynamics of competition between peers involved in choosing a factual definition among various theoretical positions defended by physicians, the political component that leads to defining the objectivity of scientific facts is also exposed. Considering also the elimination of the nosological category of hysteria from objects that belong to scientific realism, the relevance of its inclusion among the cases of Justified False Beliefs based on social epistemology is discussed.

Finally, it is proposed to examine some theoretical and disciplinary thresholds as privileged areas for a shift in scientific paradigms, without intending to resolve the tension between poles of attraction-repulsion. In this respect, the distinction between mind and body (between psychology and psychiatry) is observed in its moments of overlap, interconnection and crisis; the symbolic analysis of memory through talk therapy is investigated in its physical-corporeal forms; the life of metaphors is indicated as a structural linker of scientific theories; human behaviors are considered between medical physiology and semiological theory, defining corporeality as a place for negotiating inter-subjective meanings. In this reading, the works of Sigmund Freud and Pierre Janet, Jacques Lacan and Thomas Szasz, Ludwig Binswanger and Thomas Csordas are established as points of contact between philosophy, anthropology and psychology.

KEYWORDS: Epistemology, Philosophy of Science, Demarcation Problem, Karl Popper, Psychiatry, Psychology.

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INCIPIT

*I am nearly compelled to consider hysteria, insofar as it was fabricated at the Salpêtrière
in the last third of the nineteenth century, as a chapter in the history of art.*

(Didi-Huberman 1982: 4)

The following text can be considered, to some extent, as an epistemological digression, or a philosophical commentary, on the prolific and inspiring work of Hungarian-American psychiatrist Thomas Szasz (1920-2012). The themes and topics addressed below have first been prompted by a critical yet passionate reading of his *The Myth of Mental Illness*, a pivotal interdisciplinary opera that philosopher of science Karl Raimund Popper once defined, in a private letter to the author, “a most important book”, one that “marks a real revolution” (see Buchanan-Barker & Barker 2009: 92). In that revolutionary book, as well as in several other works, Dr. Szasz thematized the metaphorical character of mental disorders, aiming to expose and delegitimize the stunning yet controversial influence of modern medicine of the mind on society.

The revolution claimed by Popper was an ontological and epistemological one in the field of psychiatry, more precisely focused on the discussion around the reality of mental illness and the place of diagnostic construct of hysteria within that (ir)reality. As we shall see, philosophical reverbs of such a vast discussion can be followed down to the recent work of Canadian philosopher Ian Hacking, who also dedicated close attention to the “reality vectors” of what he defined as “Transient Mental Illness”.

We took together some of the most relevant positions of Szasz in relation to the ontology of mental illness and put them in dialogue with the philosophical debate on the themes of scientific truth criteria, scientific knowledge production and the discursive surroundings of scientific realism. Much of the work here developed had the intention of providing a closer look at the epistemic context of knowledge production in psychiatry, by taking in consideration the historical validation criteria of scientific statements that made their way into the taxonomy of the American DSM (*Diagnostic*

and Statistical Manual of Mental Disorders). On such ground, we propose to remodulate the status of some specific claims, strictly related to the demarcation problem, as it has been advanced by Popper and endorsed by Szasz, thus reframing the meaning of the distinction between scientific and pseudoscientific entities in epistemology. In doing so, we embrace a revisionist, pragmatic and moderately relativistic approach towards social epistemology. Covering the evolution of diagnostic construct of hysteria, we address the issues of the historicity of scientific truth, the validity contexts of claims and theories promoted by epistemic communities, the demarcation problem, the heterogeneous status of scientific knowledge and, within it, the very function of hysteria, once defined by physician and poet André Breton as an act of expression “beyond all convention” (see Breton & Aragon 1928).

As we are aware that what gives a particular sense to a word is the discourse it is a part of, we furthermore provide an analysis of the discourse within which such medical category derived its sense, as of the structural role of the metaphors engaged in its evolution. We intend to focus, moreover, on the attribution of meaning to the behaviours of “hysterical” subjects over time, as well as on the conditions of truth, or warranty, that supported the legitimization of medical definitions of hysteria from the XVI century onwards. As noted by Kurt Danziger in his *Naming the Mind*, “ignoring the fact that scientific categories have a history makes it possible to avoid fundamental questions”, thus allowing to operate in a scape where “history is replaced by essentialism” (1997: 11). If one takes current American psychiatric categories as representing some timeless, objective features of human nature, the most important questions around their reality fade away. On the contrary, by addressing the set of social conventions allowing for the existence of psychiatric and psychological kinds, we here show that there has been a dimension of the scientific imaginary that engaged with metaphors and narratives to produce a specific perception of the feminine, an ontology of mental illness and a set of epistemological criteria which made it possible for physicians to identify and deal with a number of medical taxonomical kinds, endorsing the analysis proposed by Hacking. We thus explore the power certain representations have to function as producers of discursivity, therefore coming to constitute a crucial phenomenological threshold between science and philosophy.

Hysteria, a noun physicians inaccurately attribute to the Greeks we call Hippocrates, was born in the XVI century, being defined as a nosological category in neurology near the end of the XIX century, and then suppressed nearly one century later. It was associated with observable phenomena such as convulsions, paralysis, palpitations and epileptic seizures, among others. Initially described as an organic disease, it came to be considered a “mental disorder” in the XX century, and was banned from scientific kinds between 1987 and 1993. Considering in fact that hysteria, together with numerous other diagnostic constructs, suddenly disappeared from the records of medical nosology, it is inevitable to ask: what were the ontological criteria allowing for the existence of that disease? Based on the works of Foucault, Hacking, Szasz, Didi-Huberman, Breton, Babinski, Janet, Freud, Lacan and others, we will address the issue of the various conditions of truth around the scientific myth of hysteria.

As mentioned above, during its evolution, the same disease went from being considered corporeal (of the uterus, the brain, the nervous system) to being addressed as a mental entity (a disease of thoughts, memory and feelings). We explore what kind of objectivity made the transition from the organic to the mental sphere possible, what metaphors, research methods and ontological premises may have counted as justification for the epistemological inconsistencies that accompanied its existence. In doing so, more questions will be asked, such as: has a scientific paradigm changed in a way that contemporary doctors can be warranted in believing in the natural reality of contemporary kinds, or are physicians still diagnosing mere social kinds under the scientific seal? Does adding and deleting a definition in the field of pathologies create and erase the phenomenon described by such a community? Or does it erase the social agreement around a word considered as independent from some underlying natural object? What did hysteria represent, in this sense? What kind of discursive legitimacy made the life, use and effects of this category possible? Accordingly, the politics of scientific knowledge are also approached in their historical as philosophical relevance. In addressing the philosophical topics that the history of psychiatric literature has raised, we believe that the epistemological evaluation applied to the history of the DSM definitions, throughout its editions, offers an intriguing and effective instrument. By

revising the history of the nosological construct of hysteria, as well as the philosophical debate around its reality, we aim to propose a journey capable of upholding that the sense of a scientific category may correspond with the history of what has been done with it. This approach is held both in relation with hysteria and with regards to the category of “pseudoscience” in the philosophy of science. Additionally, we aim to provide philosophical literature with an additional illustration of how scientific understanding of the world is inextricably based both on materialist objectivism and on social constructionism, with no serious reason to solve this apparent, illusionary tension. Following the investigation of the relations between the concept of “psyche” and the organicist model of medicine, we propose to evaluate the debate on the problem of scientific knowledge in its coexistence with metaphysical ideas and language, and its distinction from what is not scientific knowledge. Based on the writings of Lakoff & Johnson, Reynolds, Popper, Feyerabend, Kuhn, and Lakatos, among others, we will assess whether or not a set of beliefs uncritically assumed, philological misunderstandings, gender biases, and the extension of organic models to metaphysical entities, can characterize the pseudoscientific status of these disciplines, and this nosological category in particular.

As known, George Lakoff and Mark Johnson rejected the “objectivist myth” that has long dominated Western philosophy, arguing that it falsely claims the mind can access absolute, objective truths independent of human experience. The authors contend that objectivism is a myth because it ignores the fundamental role of the body and metaphors in shaping human thought, treating concepts as inherent properties of the world rather than products of interaction. Instead of objectivism, Lakoff & Johnson propose an “experiential realism”, which holds that the mind is inherently embodied, meaning reason is tied to our physical bodies and sensorimotor systems rather than being a disembodied, transcendental faculty. Our positions about *agency* and *embodiment*, as well as about the role of metaphors in scientific reasoning, move from their contributions.

By analyzing the claims of Szasz and Popper on the issue of the demarcation between science and pseudoscience, we propose to evaluate whether hysteria and its main contemporary substitutes (somatic symptom disorder, conversion disorder and

dissociative identity disorder) could be defined as a scientific or pseudo-scientific category within the history of medicine according to the categories of the philosophy of science. As mentioned above, classic authors have been taken as reference along this work, namely the 1920s generation of Lakatos, Feyerabend, and Kuhn. Each of them is arguing from a different conceptual model, and each presents its own difference. As known, Thomas Kuhn viewed scientific development as alternating between normal science (puzzle-solving within a paradigm) and revolutionary science (paradigm shifts). He posited that these shifts are often irrational and driven by social factors because different paradigms are incommensurable, meaning they cannot be objectively compared using a shared standard of rationality. This contrasts sharply with Lakatos, who insisted that such shifts are rational if the new programme is empirically more progressive, and also with Feyerabend, who denied that any rational method should constrain scientific inquiry. The work of Lakatos, in fact, sought to reconcile Karl Popper's rationalism with Thomas Kuhn's historical insights by defining science through "scientific research programmes" rather than isolated theories. He argued that theory change is rational when a programme shifts from a degenerate state (relying on ad-hoc auxiliary hypotheses to protect a "hard core") to a progressive one that predicts novel facts, thereby avoiding Kuhn's claim that paradigm shifts are irrational or driven by "mob psychology".

Paul Feyerabend took a radically different stance, famously rejecting the idea of a universal scientific method entirely. While he agreed with Lakatos and Kuhn that theories are often protected by ad-hoc adjustments, he concluded that science progresses through epistemological anarchism ("anything goes"), where breaking methodological rules and abandoning strict rationality is often necessary for growth. Unlike Lakatos, Feyerabend argued that science does not deserve a privileged status over other ideologies and that incompatible theories are often incommensurable, making rational comparison impossible. Although such discrepancies may lead to consider their technical concepts as not interchangeable, and in fact we also believe they are not, in this work we try nonetheless to consider them as integrable, and we therefore operate a goal-oriented incorporation of their theories and statements in our argumentation. This might give the impression that we disregard their differences, while we rather aim to select, from each author, what might help us build up our own position.

We mentioned how, within the medical-scientific tradition, organic theories were later overtaken by functional and psychological approaches, as the concept of the hysterical body (diseases of the nervous system) gave way to theories of a hysterical mind (dissociation, conversion, somatization), in accordance with the Cartesian dualism of the Ancien Régime. Following this dualism, the place of the disease “hysteria” became the abstraction of the psyche, postulating not only the existence of the soul, but also that this metaphysical element could become sick. This relationship is investigated in order to understand how the concepts of psyche, soul and mind, originally belonging to the philosophical and theological tradition, have been progressively modified in their meaning and ontology through their passage under the medical gaze. We show how such concepts have been slowly reshaped by philosophers and physicians through a narrative progressively inclined towards the mechanist and organic model of understanding. Focusing attention on the transition from the sphere of the body to that of the mind, we argue that the approach of Freudian psychoanalysis, whose status between science, pseudo-science and hermeneutics is also discussed, led to an ontologically challenging understanding of the phenomenon of hysteria precisely by removing it from medicine and handing it over to the symbolic analysis of memory, experience and affection through talk therapy.

Ultimately: why did we choose hysteria? The answer is simple. If there is a phenomenon that stands at the very junction of all of those mentioned themes, or better, an entity that was born precisely on the disciplinary threshold between medicine and philosophy, one that has been analyzed under virtually every interdisciplinary outlook, that’s hysteria. If it is true that several dismissed DSM constructs would have been able to serve as a support for a research on the reality of mental illness, as well as for an epistemological critique of psychiatry, one has also to acknowledge that no other category has ever puzzled doctors as deep as hysteria, nor has any other entity brought to life entire disciplines and motivated such a rich and conflicting bibliographical production, questioning the very ontological definition of reality in medicine and psychology. Along the XIX and XX century, in fact, hysteria has been the ineluctable cornerstone for the rise of neurology (Charcot), psychoanalysis (Freud) and dynamic psychology (Janet). Hypnosis, the medical interpretation of dreams, empirical research on memory editing, psychosomatics, all grew around the myth of hysteria, as so did a

large series of concepts and words like dissociation, subconscious, conversion, unconscious, somatization, and more. Many of those terms, born around the enigma of hysteria, are still adopted in medical and psychological glossaries. Moreover, hysteria stands at the very border between body and mind, merging their domains to the point that both Pierre Janet and Sigmund Freud unavoidably found themselves compelled to bring metaphysics straight back into medicine, and the other way around, in order to keep their research running. As they could not find the explanation in the body, they threw themselves onto the soul. From that moment onwards, medicine took root in mysticism, further giving rise to psychiatry: literally the cure of the soul. Therefore the soul itself (*psyché*) is here considered as a metaphysical hypothesis advanced to solve the problem of scientific knowledge around hysteria, a problem which could not be successfully addressed through neurology.

With regard to the methodology, our research approach has a genealogical, discursive and epistemological nature, based on historical, contextualist and phenomenological literature applied to the analysis of the epistemic criteria adopted for sustaining the reality of a scientific definition. The historical analysis focuses on the reading of authors – primarily physicians – directly involved in the development of the category of “hysteria”, on the critical interpretation of the process of attributing meanings to behavioural phenomena and on the contextualization of the reference paradigms of medicine through the tools provided by the philosophy of science. The evaluation of medical definitions are referred to the epistemological and phenomenological philosophical tradition in order to understand the relationship between the subject and the object of knowledge in the medical-scientific environment (in the case study, between an epistemic community and the behaviours defined as “symptoms”).

We are aware that the meanings of some of the concepts we adopt here are not unequivocal in the philosophy of science, as they are subject to different uses and definitions, promoted by several authors and traditions, as it is always the case. Wittgenstein famously considered philosophical problems to be byproducts of misunderstandings of language, implying that speakers should, if not understand each others, at least to try misunderstand each others as little as possible. Therefore, willing to

minimize misunderstandings ourselves, we will briefly give some references to our uses of words like “contextualist”, “materialism”, “constructivism” and “realism”.

When we claim we refer to contextualist tradition in epistemology, in order to see under what conditions one could attribute knowledge to physicians adopting the DSM, we mainly think of authors like DeRose, Cohen, Sosa, Lewis, and the criticisms of Feldman, although not all of them are endorsed in our conclusions, and we ourselves do not embrace a contextualist approach to knowledge attribution in science, for a number of reasons. For instance, Keith DeRose’s “attributor contextualism” holds that the epistemic standards required for a knowledge attribution to be true vary depending on the context of the speaker (the attributor), particularly based on practical stakes or the prominence of skeptical doubts. His framework posits that while we genuinely know many things in low-standards contexts, we do not know them in high-standards skeptical contexts, thereby explaining why skepticism seems plausible without denying our ordinary knowledge claims. DeRose solves the paradox of skepticism by accepting that skeptical conclusions are true in high-standards contexts while maintaining that ordinary knowledge claims are true in everyday contexts. As we have been dealing with what we consider high-standards context of knowledge production (scientific knowledge production), we had to follow the skeptical tension reach its limits within the historical medical community, so that the division between ordinary and high-standards context did not prove very useful to us here. Similarly, Stewart Cohen’s epistemic contextualism, or “relevant alternatives contextualism”, asserts that the truth conditions of knowledge attributions (e.g. “S knows that p”) are determined by the speaker’s context rather than the subject’s context. In chapter three, we tried to bend such view towards social epistemology. Cohen’s view posits that the word “know” functions indexically, meaning its standards vary across conversational contexts, allowing a speaker to truthfully say “S knows p” in one setting while another speaker truthfully says “S does not know p” in a different setting without contradiction. Although we do agree with this general view, we see that Cohen’s specific approach focuses on justification coming in degrees and resolves skeptical paradoxes by shifting standards. Accordingly, in ordinary contexts, skeptical alternatives are considered as irrelevant, so that high-level justification is not required, making everyday knowledge claims true. In skeptical contexts, these alternatives become relevant, raising the

standards for justification in such a way that everyday knowledge claims become false, while the closure principle remains valid. The work of Sosa also developed in a similar direction. However, what we have been observing by applying those views to the history of medicine, is that such standards are in fact very much blended on the field, and that many other practical, social, and in general extra-scientific concerns function as justification for knowledge attributions within the epistemic community. Quite often, a theory is held as true because of its function within the community, not because of its absolute truth. Newton's equation describing gravitational motion has been held as true because it works, meaning its mathematics precisely led to successful previsions and to the observation and discovery of Neptune, and this regardless of being based on unsolved mysteries and assumptions like the essence of gravity or inertia, and even besides having been overtaken by Einstein's work. Therefore, we closely followed Feldman in his critic of epistemic contextualism, when he argued that it fails to provide a satisfactory response to skepticism because it treats the debate as merely semantic rather than substantive. We do embrace this view. Feldman contends that the core issue in skepticism is whether our evidence is good enough to meet ordinary standards, not whether the word "knows" changes meaning in different contexts. Feldman acknowledged that contextualism was a valid semantic thesis regarding how the word "knows" functions in different contexts, but he also asserted that this does not resolve the substantive epistemological issue of whether we actually possess knowledge. We also follow him when he distinguishes between contextualism as a thesis about the truth conditions of knowledge sentences versus a theory about knowledge itself, arguing that the former does not resolve the latter, and that even if knowledge attributions are context-sensitive, this fact does not mean we satisfy ordinary standards for knowledge, which is what skeptics truly challenge. Nonetheless, what we did here, especially in chapter three, was to bring together those debates around justification, skepticism and contextualism, to observe the limits of contextualism itself in defeating skeptical arguments and suggesting that a redefinition of knowledge as a social practice has to be considered at play. We meant to engage with justification as the property of a belief that makes it rational, reasonable, or warranted to hold, distinguishing genuine knowledge from mere true opinion or lucky guesses. As we shall see, not only the truth conditions of knowledge attributions are determined by the speaker's context: sometimes they are socially determined by other variables such as the speaker's *status*, the speaker's *beliefs*, the speaker's *intentions*, the speaker's *influence*. However, we do not give our position

a name, as we do not fully endorse any contextualist tradition in particular. When we talk about “context”, we in fact embrace a much wider system of variables than the mere semantic environment traditional contextualism draws upon. As known, the theory of Lewis resolves the tension between everyday knowledge and skeptical scenarios by arguing that epistemology itself is the culprit in creating the illusion of “elusive knowledge”. When philosophers raise skeptical possibilities (e.g., being a brain in a vat), they bring them into the domain of attention, making them relevant alternatives that cannot be ignored, thereby raising the standards for knowledge so high that ordinary claims become false. In normal contexts, however, these skeptical possibilities are ignored, allowing us to know things like “I have hands” or “this is a zebra” without eliminating every logical possibility of error. By stressing some of the rules proposed by Lewis, like the rule of belief, we consider that specific players and environments in the scientific knowledge production have the power to bring into the domain of attention, and out of that domain, alternatives, subjects, possibilities and statements. If we had to declare a theoretical, epistemological affiliation, we would rather look at philosopher Helen Longino, and her “social epistemology”, primarily articulated in *Science as Social Knowledge*. There, she proposes a view defined as “contextual empiricism”, which argues that scientific objectivity is not achieved by isolating individuals from social values but through socially structured critical interactions. Longino contends that data and evidence are not self-interpreting; rather, their relevance is determined by background assumptions that only become visible and subject to critique when diverse perspectives engage in transformative criticism. Longino’s approach bridges the gap between traditional empiricism and social constructionism, asserting that scientific knowledge is a social enterprise secured by the critical and cooperative interactions of inquirers rather than the detachment of the individual.

This thinking brings us straight to another term we adopt along this work: that of “social constructionism”. With this concept, we specifically refer to a popular theory belonging to social science, probably first outlined by Berger and Luckmann, positing that much of what individuals perceive as “reality” is not an objective truth waiting to be discovered, but rather a socially constructed outcome of shared assumptions, historical contexts, and cultural interactions. This theoretical assumption is at the basis of pretty much all of the present work. Under this understanding, knowledge, including

scientific knowledge, meanings, and various social phenomena—such as gender, race, class, and disability—are considered as collectively formulated and sustained by society rather than being biologically predetermined or naturally fixed. To some extent, the research around the reality of mental illnesses proves them to be the outcome of strategically selected historical descriptions and diagnostic strategies, combined to create the impression of a stable scientific tradition which does not seem to exist.

Accordingly, we will consider meanings as developed through interactions between social agents rather than individually, with language and communication playing a fundamental role in constituting reality. Concepts, including scientific concepts, are thus considered as entities created through social negotiation and then institutionalized, embedding knowledge into the institutional fabric of society as “taken-for-granted” realities. In context: the ongoing negotiation among physicians produces the DSM institutional standard. As a consequence, it is assumed that what is considered as real, true or normal, varies across cultural and historical contexts, meaning there are multiple realities that compete for truth and legitimacy rather than a single absolute truth. Under such historical and cultural relativity, the temporal dimension of the status of scientific knowledge, always subject to revisionism, is considered. As such theoretical coordinates are applied to the human body, especially in the last chapter, we highlight that while bodily continuity and variations do exist, the categories and definitions humans attach to them are inventions of specific societies and groups. And within in each epistemic group, say physicians, as it is the case here, different peers and groups of peers create different inventions around categories. Nonetheless, as far as we ourselves embrace most of the scientific outlooks of physics, and we suspect that mathematics might be more discovered than invented, we define our approach as a moderate relativism, instead of an absolute relativism.

We mainly use the term “materialism” to enter in dialogue with the views of Thomas Szasz, Willard Van Orman Quine, and marginally others. To this end, we merely consider materialism as the theory according to which physical matter is the only reality and that everything, including thought, feeling, mind, and will, can be explained in terms of matter and physical phenomena. Matter is there the fundamental substance of nature, so that all things, including mind and consciousness,

arise from material interactions and depend on physical processes, including those of the human brain and nervous system. To the extent that mainstream psychiatric assumptions imply the reduction of human inner life, including meanings (or regardless of them), to such material interactions, we refer to that tradition as materialist. Distinguished from materialism, yet often parallel to it in this work, is the notion of “scientific realism”. Although scientific realism is characterized differently by virtually every author who discusses it, we shortly consider it as an attitude toward the content of our best theories and models, recommending belief in both observable and unobservable aspects of the world described by the sciences. For this reason, we insist, particularly in chapter three, on the idea that accepting psychiatric taxonomical products within the realm of the sciences implies that social ontology integrates scientific realism, and, elsewhere in chapter four, that other entities like metaphors, discourses, and metaphysical assumption also incorporate such realism. Scientific realism, as we mean it, asserts that the world has a definite and mind-independent structure that exists independently of human thought, language, conceptual activity, and perceptual experience.

As this research widely relies on the genealogical method of inquiry, it is led by a set of guiding questions around the production of the reality of mental illness. Accordingly, we will not ask what hysteria is, or was, but rather try to understand how it came into the world, what purposes it has served and still serves. What kind of needs led to the creation of this category? What environment, what narrative, what conditions accompanied, regulated and arbitrated its evolution, eventually leading to its elimination? What mechanisms of knowledge production made it look like a legitimate, justified belief among scientists? Did those beliefs change in the moment of its erasure? Did they represent real knowledge, in the sense of Edmund Gettier?

Bridging nominalism and realism, the medical-psychiatric taxonomic model is approached in its threshold status between social construction and scientific objectification, between materialist ambition and metaphysical premises, that is: between science and philosophy. By evaluating the dynamics of disagreement between peers involved in the election of a factual definition among various theoretical positions

among physicians, the political component leading to the “objectivity” of scientific truth is also exposed. We further consider the truth conditions around metaphorical and material entities, or between kinds based on material or social ontology.

Finally then, the text proposes the examination of some theoretical and disciplinary thresholds as privileged areas where to search for the transcendence potential of a scientific paradigm. In this regard, the distinction between mind and body (between psychology and psychiatry) is observed in its moments of overlap, interconnection and crisis; the symbolic analysis of memory through talk therapy is investigated in its physical-corporeal expressions; the life of metaphors is indicated as a structural link between scientific theories for the production of knowledge as an understanding; human behaviours are considered between medical physiology and semiological theory, defining *corporeality* as a place for the negotiation of inter-subjective meanings. In this reading, the works of Freud and Janet, Lacan and Szasz, Binswanger and Csordas are established as points of contact between philosophy, anthropology and psychology.

Although this work may exhibit all the flaws of a compilation of articles, this is not a mere collection of independent papers. It is true, however, that during the writing process and the research progress of those years of inquiry, we found it more easy to think of each chapter in terms of its own features, partial conclusions and focus, with their junction constituting the whole picture of our investigation. It is also true that most of the work here proposed has in fact been published, at some stage of its development, in double-blind, peer-reviewed international journals, indexed in Elsevier-Scopus and Clarivate-Web of Science databases. We hope this condition did not bring to the work the unpleasant feeling of some kind of fragmentation. We did our best to build up a uniform structure, considering each particular chapter as progressively integrating the wider picture with its own focus. The contents of the chapters are organized as follows, in accordance with the research project presented at the very beginning of this journey.

Chapter one

Chapter one has been published as *Hysteria: Rise and Fall of a Baffling Disease* in the international medical «Journal of Psychopathology», Vol. 28, No. 3, November 2022.

We there set the first stage for the philosophical discussion, by offering an overview on the historical critical revision of the life of the word “hysteria”, which is still widely and erroneously considered as an ancient disease, first formulated by Hippocrates. By following the origin and development of that nosological category in the history of medicine, we highlight a number of particular themes that are analyzed afterwards, such as the slippery ground on which the distinction between science and pseudoscience takes place, the epistemological viability of the Justified False Belief attribution in light of disagreement among peers, the persistence of religious and metaphysical beliefs in scientific realism and the life of metaphors within scientific theories related to hysteria. This chapter proposes a reconsideration of the category of hysteria not as a concept of Greek origin but rather as a product of the modern Renaissance. By refuting various contemporary sources, both from the medical field and from psychological accounts, we indicate the philological researches that identify the translation and interpretation inaccuracies responsible for the false belief in the Hippocratic origin of the disease. Then, from the XVI and XVII centuries onwards, the construction of the nosological category is followed in its most relevant moments through a comparative reading of the medical treatises within which the entity was theorized, with particular attention to the metaphysical shift from the idea of a hysterical body to the one of a hysterical mind. The resistance of the belief in a physical illness despite the problem of the missing lesion is described as part of the theoretical proposals of the epistemic community. In this regard, the most significant propositions for the definition and interpretation of the phenomenon put forward by physicians in the XIX and XX centuries are extensively reported. The readings of Jean-Martin Charcot, Hippolyte Bernheim, Pierre Briquet, Joseph Babinski, Pierre Janet, Sigmund Freud and Thomas Szasz are compared. The competing theories of *psychasthenia* and *pitiatism*, *neurosis*, *protolanguage* and *suggestion* are briefly described, posing the issue of the disagreement between peers as a challenging theme for the definition of a universal, objective, scientific factuality by means of observation. Chapter one is therefore dedicated to revisionism in the history of medicine, and thematically oriented to the identification of themes and subjects to be more deeply assessed in the next chapters.

Chapter two

The content of chapter two has been published as *Pseudoscience Charges and the Demarcation Problem* in the international historical-philosophical journal «Acta Baltica Historiae et Philosophiae Scientiarum», Vol. 11, No. 2, 2023.

In chapter two, we address the classical theme of the demarcation problem in the philosophy of science. The discussion moves from the idea, proposed by Thomas Szasz, that psychiatry should be considered as a pseudoscience in light of its foundational adoption of the metaphor of mental illness, applied to the realm of the mind from its original organic, material background. This chapter therefore discusses the belonging of the category of hysteria to the class of pseudoscientific definitions. Moving from the epistemological critique by Szasz, we propose a reconsideration of the demarcation problem from Karl Popper's perspective as a *petitio principii* against the epistemic heterogeneity inherent to scientific knowledge. First, with direct readings from Popper, we show how the author himself first framed the demarcation problem, with the purpose of clearing the way from several misunderstandings that inspire a good deal of current philosophical debate. The various and most recent proposals for demarcation methods are also presented, as well as the different definitions of pseudoscience in contemporary philosophical literature. Considering scientific paradigms as provisional structures in continuous evolution, we suggest, endorsing Larry Laudan, that it is not possible to establish sufficient and necessary criteria able to operate a definitive demarcation between theories and statements according to the two distinctive classes of science and pseudoscience. Contrary to both Karl Popper and Thomas Szasz, we approach the demarcation problem from a pragmatic point of view, considering it as a political and normative tool rather than a descriptive one. Finally, it is argued that, within the epistemological tradition, the reason for the existence of the category of pseudoscience coincides with the impossibility of defining the limits of scientific knowledge and its methods. Therefore, despite the questionable standards of scientificity adopted by psychiatric taxonomy, hinted in chapter one and further explored in chapter three, the definition of hysteria as a pseudoscientific category is refused.

Chapter three

The text of chapter three has been published as *Social Ontology, Transient Mental Illness and Justified False Belief* in the international philosophical journal «Symposion. Theoretical and Applied Inquiries in Philosophy and Social Science», Vol. 12, No. 1, May 2025.

In chapter three, we first consider another relevant theoretical proposal around the reality of mental illnesses and hysteria: the one advanced by philosopher of science Ian Hacking, who proposed the concept of “Transient Mental Illness”. In this chapter, the category of hysteria is evaluated as a result of the social construction of a scientific fact, on the border between “natural kinds” and “interactive kinds” of taxonomic categories. We discuss the social ontology of mental illness in relation with traditional scientific materialism and empiricism in medicine. After considering the elements of the epistemic context that participated in the medical perception of the reality of dismissed DSM categories, the characterization of their existence in terms of temporary reality is challenged. We take Hacking's contribution on "ecological niches" towards the contextualist epistemology of "Justified True Beliefs" (or, in this case, Unjustified False Beliefs), further trying to extend some reflections of Edmund Gettier around the definition of knowledge. Further following the work of the late Kuhn on taxonomic revolutions, we propose the separation of the ideas of “scientific revolution” and “taxonomic reformulation”, claiming that the disappearance of the category of hysteria does not correspond to a resolution of the conflicts inherent to the psychiatric paradigm as it is represented in the DSM — and increasingly in the ICD. Against Hacking, we do not consider DSM rewritings as scientific revolutions. We argue that the way these manuals define their kinds does not guarantee on their reliability, and that therefore the new nomenclature is not suitable for better defining dysfunctional behaviours, being unable to account for the reality of those diagnostic constructs beyond mere social ontology.

However, we consider the history of such revisions as a revealing one, with regard to the way in which epistemic communities organize their contexts of validation of facts and beliefs, which we interpret in a cautiously relativist way. We lastly propose to consider the “transdiagnostic model” as the long invoked, much awaited, as much resisted, Kuhnian scientific revolution psychiatry is expecting, one able to trigger not

only a cosmetic revision of nomenclature, but to reconsider the very premises at the foundation of the ontology of psychiatric scientific kinds.

Chapter four

The content of paragraph one, chapter four, has been published as: *Psychopathology, Memory Editing, Talk Therapy: Philosophy of Medicine on the Body–Mind Frontier*, in «Histories», Vol. 6, No. 8, January 2026.

The text of paragraph two, chapter four, has been published as: *Symptom, Sign, Meaning. Dora, Embodiment and the Semiology of Behaviours*, in «Symposion. Theoretical and Applied Inquiries in Philosophy and Social Science», Vol. 13, No. 1, May 2026.

Paragraph three, chapter four, is currently in press as *Metaphors in the Clinical Gaze: Trauma, Memory, and Unconscious*, in «Orbis Idearum», Vol. 14, No. 1, Summer 2026.

In this final chapter, *Thresholds. Hysteria on the Liminality Across Humanities and Science*, an interpretation advanced by three doctors (Thomas Szasz, Jacques Lacan and André Breton) is recovered and analysed. According to those physicians, dysfunctional behaviors at the basis of the medical definitions of hysteria should not be considered as medical symptoms but rather as non-verbal acts of communication, articulated through a body protolanguage. To assess this hypothesis, we suggest to phenomenologically consider some theoretical and methodological thresholds as a proper area of investigation, standing on the very border between medicine and metaphysics. In this regard, the structural interconnection between religion and medicine inherent to the concept of psyche, analyzed in its historical evolution and relativized in its metapsychological premises, is highlighted.

In order to identify the series of situations that gave raise to ontological definitions, an approach based on the juxtaposition of the historical and cultural variations of the phenomenon called hysteria is proposed, suggesting that precisely the areas of interdisciplinary overlap may constitute the essence of such entity, also considered as “crisis of subjectivity”, or “crisis of presence”. We hence analyze some of

the metaphors that sustained the medical gaze creating a narrative, a meaning and a purpose, as integrating the power of certain representations to function as producers of discursivity. In this chapter, we also take some distance from the theory of Thomas Szasz, who considered such metaphors as a hallmark of pseudoscience. We rather regard at the deployment of metaphors as a common tool adopted by scientific reasoning to create and validate theories, practices and conclusions, suggesting that such a distinction is not the most accurate place where to look for psychiatric fallacies. By crossing semiology and anthropology, as well as through the reevaluation of some psychoanalytic tradition under feminist literature, the body is considered as a means of resistance through the analysis of culturally incorporated meanings, where the nervous system represents an interface between subjectivity and the environment, and where memory is considered in its function as a therapeutic hinge across body and mind, through interpersonal relationships (talking therapy) and the alteration of states of consciousness (hypnosis). The concepts of *embodiment* and *agency* are advanced as tools capable of bringing psychology and psychiatry closer together in the social assessment of the wider phenomena defined as dysfunctional behaviours.

Paragraph one, *Psychopathology, Memory Editing, Talk Therapy: Philosophy of Medicine on the Body–Mind Frontier*, is dedicated to the exploration of the historical and philosophical intersections of psychopathology, memory editing, and talk therapy within the context of the body–mind frontier. The history of psychopathology is framed as a search for a middle ground between Cartesian-Platonic dualism and physical reductionism, using diagnostic constructs to bridge these traditions. We show how Freud and Janet historically used hypnosis to intentionally modify their patients' traumatic memories, demonstrating that even fantasy-based memories could produce real somatic symptoms. The practice of "writing new words in the human soul"—reinterpreting past experiences verbally and emotionally to alleviate symptoms—is presented as a foundational psychotherapeutic technique. We further argue that the modern medical concept of the psyche is a historical and cultural construction emerging from the porous boundaries between religion, philosophy, and the scientific method. We propose that psychoanalysis should be viewed more as a hermeneutic practice than a strict science, or alternatively, that hermeneutics can function as a scientific and therapeutic tool. The discussion finally extends to the nature

of memory itself, situated at the threshold of consciousness, organic life, and intergenerational potential.

Paragraph two, *Symptom, Sign, Meaning. Dora, Embodiment and the Semiology of Behaviours*, explores the complex relationship between dysfunctional behaviours, embodiment, and symbolic communication, with an approach grounded in medical anthropology, feminist critique, phenomenology, and psychoanalytic theory. By revisiting the classical case of Freud's patient Dora, and comparing it to ethnographic cases of mass hysteria linked to spirit possession in Malay factory workers, we propose to look at the semiology of behaviours to interpret bodily signs embedded with rich cultural meanings. These behaviours may reflect social distress, gender inequality, and structural violence, challenging traditional medical frameworks that primarily consider symptoms as mere disease indicators. Drawing on the ideas of theorists like Mary Douglas, Jacques Lacan, and Ludwig Binswanger, we advocate for understanding behaviours as communication acts, embodiments, and agency carriers existing within socio-cultural networks. Ultimately, we advocate for a transdisciplinary, meaning-centered approach to dysfunctional behaviours that moves beyond reductionistic biomedical and Freudian models by incorporating existential, cultural, and phenomenological insights.

Paragraph three, *Metaphors in the Clinical Gaze: Trauma, Memory, and Unconscious*, explores the pivotal role of metaphors in psychological theories, particularly within psychoanalysis and dynamic psychology. Drawing from foundational thinkers such as William James, Jacques Lacan, and Sigmund Freud, we examine how a specific set of metaphors shaped scientific knowledge concerning trauma, memory, and the unconscious. The discussion emphasizes how metaphors may bridge empirical observations and theoretical meaning, revealing an epistemic heterogeneity in scientific inquiry beyond pure objectivity. We trace the historical and semantic evolution of key clinical concepts as metaphorical constructs that allow new scientific and philosophical insights. Challenging Szasz against the strict rejection of metaphorical language in science, we argue for recognizing metaphors as essential heuristic and cognitive tools rather than mere markers of pseudoscience. The work further reflects on the cultural

influences on metaphor deployment, and the implications of metaphor-driven diagnoses in psychiatry, highlighting the fluid boundaries between metaphors, facts, and narratives in scientific practice.

CHAPTER 1 ¹

HYSTERIA: RISE AND FALL OF A BAFFLING DISEASE

RESUME

This first chapter presents a synthesis of the main stages in the construction of the conceptual entity targeted as hysteria.

Several academic papers still report historical accounts of hysteria as a long-lasting – although disappeared – disease dating back to Hippocratic evidence. However, both philological research and the history of medicine, together with recent gender studies criticism, suggest that we shall reconsider the very origin of this category, further questioning the context of its reality across time. An account is given of this revisionism.

Hysteria is here presented as a Renaissance product, virtually dismissed by neurologists in the early 1900 but definitively waned only in 1987 and 1993 by WHO resolution, after having moved from neurology to psychiatry. Its history represents a challenging subject in the theme of objective knowledge in science, drawing our attention to the burden of the political choices of an epistemic community within the process of knowledge production, legitimation and validation aiming for a scientific understanding of the world.

An account is given of the multi-layered construction and shifts of hysteria as a disease within the medical models of understanding, and of its progressive deconstruction over time.

The content of this chapter has been published as an article entitled *Hysteria: Rise and Fall of a Baffling Disease*, in «Journal of Psychopathology», Vol. 28, No. 3 (2022), pp. 152-161. DOI: [10.36148/2284-0249-461](https://doi.org/10.36148/2284-0249-461)

HIPPOCRATES: A PHILOLOGICAL MISUNDERSTANDING

Several contemporary sources, including scientific papers, encyclopedia articles and academic books, report historical accounts of hysteria as a long-lasting disease dating back to Hippocratic origins:

The word hysteria originated in the *Corpus Hippocraticum* (c420 BCE) as a natural explanation for a variety of diseases in women. (Reynolds 2018: 208)

The term hysteria, derived from the Greek word hystera (signifying the uterus), dates back to at least the time of Hippocrates. (North 2015: 498)

Hippocrates (5th century BC) is the first to use the term hysteria. Indeed he also believes that the cause of this disease lies in the movement of the uterus ('hysteron'). (Tasca et al. 2012: 110)

There had always been in Western medicine since the time of Hypocrites [sic] a belief in this disease called 'hysteria', which means womb disease. (Maines, cited in King 2011: 207)

The term 'hysteria' has been in use for over 2.000 years and its definition has become broader and more diffuse over time. (Gale Encyclopedia of Medicine, 2002: 1764)

However, in contrast to the common sense, a number of authors recently questioned this smooth lineage, arguing that the origin of the notion of hysteria proves to be way more recent. A synthesis is here given on this side of the debate.

Although many papers and authors state that the word, together with the first

diagnosis, was created by Hippocrates, contemporary philological researches claim not only that none of the texts collected in the *Corpus Hippocraticum* can be legitimately attributed to the father of Medicine (not even the one containing the ritual oath), but also that within the collection of works ascribed to the ancient physician-philosopher there is no reference to a proper disease called hysteria (see Goldstein, in Gilman et al. 1993; King 2011). Philologists also claim that the very word “hysteria” does not belong to the Greek original text.

Indeed, the “female diseases” described in the ancient medical anthology were considered as consequences of a womb suffocation, or suffocation of the uterus, in Greek *hystera* [ὑστέρα] (lat. *utērus*, sanscr. *udāram*, meaning «belly»), but such an etiological argumentation did not engage the idea of a proper disease, clearly isolated and identified, nor even a specific disease definition (King 2011; Hanson 1975). Instead, given that the womb was an exclusively female organ, when a woman expressed an unusual discomfort, unfamiliar among men, a simplistic reification drew the attention to that organ as the source of the disturb. Most of female disorders were believed to be as many consequences of a womb suffocation. De facto, Hippocratic medicine argued that a protracted absence of sexual intercourse could dry up the womb, making it lighter. Conventional wisdom claimed that in this state of lightness the womb could move in many directions, affecting other organs and tissues by contact (liver, heart, diaphragm, etc.), along a canal ideally connecting the womb to the mouth (Tognazzi 2008). Therefore, any pain, confusion, seizure observed in women and not experienced by men could be explained as a consequence of the *suffocation of the uterus* (a *histerical* suffocation, *uterical* suffocation, of the uterus) due to the contact with other organs. The therapy prescribed was to sleep with the husband, so to restore the correct humidity level of the womb and bring the uterus back to its original location. Still, researchers claim that in the *Corpus Hippocraticum* there is no occurrence of the word “hysteria” (Gilman et al. 1993), nor of a condition or disease called hysteria, nor of a hysterical woman (which would literally mean woman *of the uterus*, *uterical* woman), and not even a reference to a specific disease of the uterus itself defined that way. A simplistic uterine etiology was an explanation for the most varied discomforts expressed by women. The word *histerikon*, found in the Greek original text, is precisely an adjective, attributed to the suffocation, not to women themselves. More accurately, according to King (in Gilman et al. 1993), both

the medical category and the word hysteria were added much later to the *Corpus Hippocraticum* by Émile Littré, in the XIX century.

While translating the *Corpus*, Littré introduced his interpretation, being influenced by the modern categories of his own age as by the earlier additions of Galen's translation, therefore spreading in the modern age concepts extraneous to the original Greek version. Moreover Galen himself, in the II century AD, had already mixed the Hippocratic fragments with some considerations of Pliny the Elder, creating the renowned 35th aphorism: "In a woman suffering from hysteria, a sneeze is a good thing".

In brief, those philologists argue that the word identifying a specific disease called hysteria does not belong to Greek antiquity but was, instead, the result of later additions, inaccurate or too free translations, and alterations of the original text.

Hence, the fact that the Greeks explained one or more female sicknesses by means of imaginary womb dislocation does not seem to justify contemporary claims stating that there would be, since the ancient times, a disease called hysteria by Hippocrates, which traveled down to the XX century. It looks therefore epistemologically incorrect to sustain the Greek origin both of the word hysteria and of the first hysteria diagnosis, as well as the existence of a precise disease dating back to Hippocrates and reaching contemporary times: "here begins the second myth: Hippocrates would be the father of hysteria, result of a wandering uterus because of sexual abstention" (Amaral do Espírito Santo 2008: 16).

Thereby, the ambiguous reference to a Hippocratic hysteria has at best risen in the modern age, filtered through Galen, filtered again through Littré, to uphold by the authority of the ancients a category created in fact by modern doctors, including Freud, Sydenham and Charcot. The quotation of Greek texts, affected by modern distortion, takes then the shape more of a legitimization demand (a truth-effect device) than of a reliable historical evidence.

The origin and process of transmission of the error in translation should now be plain. Littré read the Hippocratic corpus in the context of the mid-nineteenth century, in which hysteria was a recognized condition of debated etiology; he expected to find

hysteria in the text, duly found it, and drew it out in the headings he wrote for the various sections. Robb translated into English the passages headed by Littré as “Hysteria”, and subsequent readers of the Hippocratic corpus have accepted the categories imposed by Littré on his material. (King, in Gilman et al. 1993: 8)

MIDDLE AGES: DEVIL, WITCHES, DETENTIONS

The symptoms of 'hysteria' have also long been ascribed to 'demonic possession and witchcraft'. From the fall of the Roman Empire to the Enlightenment, many illnesses and cures were attributed to sorcery, witchcraft and saints, and little distinction was made between medical, neurological and psychological disorders. Much human suffering was the result of a 'Divine', who inflicted disease as punishment for malefaction or sins, or of witches and warlocks doing the Devil's work. Charlemagne (742-814 AD) sentenced those suspected of practising witchcraft to death. Such beliefs led to the infamous witch trials, the organized persecution, torture and murder of thousands of people who were psychologically or neurologically ill. (Pearce 2014: 2)

Before considering the criteria for the existence of hysteria during the Middle Ages, we may have to analyze a significant distinction. In fact, removing the Greek reference to hysteria instantly paves the way for (at least) two different readings of the issue.

On the one hand, one could argue that the existence of a phenomenon takes place independently of its definition over time, resuming the Renaissance idea of an absolute nature, whose language and structure, reality and laws one has just to discover (on this, see Latour 1991). This stable, objective fact would progressively have passed through various names, understandings and definitions across time. Along this line, medical historical approach assumed that both the symptoms and the disease have always existed, while scientific understanding of them has progressively evolved across time. What has been called by hysteria in the ancient Greece (although we saw that's a wrong belief) was then interpreted as witchcraft in the Middle Ages and was again studied scientifically starting from the XVII century taking back its medical name which, at least by evidence, never existed before then. This category remained until 1987, when an even better understanding wiped out the disease, redeploying its symptoms (mainly behaviours) towards other three different disturbs, with three different names. According to this view, antiquity attributed to the movements of the womb the responsibility of the disease, while the Middle Ages

misread the symptoms as evil signs, ignoring it was all about a natural disease. Sigmund Freud's formulation is probably among the best examples of this kind of interpretation:

History.—The name 'hysteria' originates from the earliest times of medicine and is a precipitate of the prejudice, overcome only in our own days, which links neuroses with diseases of the female sexual apparatus. In the Middle Ages neuroses played a significant part in the history of civilization, they appeared in epidemics as a result of psychical contagion, and were at the root of what was factual in the history of possession and of witchcraft. Documents from that period prove that their symptomatology has undergone no change up to the present day. A proper assessment and a better understanding of the disease only began with the works of Charcot and of the school of the Salpêtrière inspired by him. Up to that time hysteria had been the *bête noire* of medicine. The poor hysterics, who in earlier centuries had been burnt or exorcized, were only subjected, in recent, enlightened times, to the curse of ridicule; their states were judged unworthy of clinical observation, as being simulation and exaggerations. [...] In the Middle Ages the discovery of anaesthetic and non-bleeding areas (*stigmata Diaboli*) was regarded as evidence of witchcraft. (Freud 1981, vol. I: 41, 45)

On the other hand, having eliminated the mythic Greek roots, we could henceforth consider hysteria not much as a rediscovery but rather as an invention of the modern age, without reliable historical evidence nor antecedents. Here modern doctors and natural philosophers, while thinking they were recognizing and studying deeper an antique object (a natural, organic, female disease), were actually creating this idea, this cognitive item, for the very first time.

Nevertheless, if the idea of a natural disease called hysteria is a modern creation, as it seems to be, one could still argue that the same behaviours described as symptoms by XIX century physicians have indeed been reported way before the creation of the medical category of hysteria.

A different attempt to define and understand the issue is the one considering those behaviours as a non-verbal language (Szasz 1974 [1961]). Here also, a

scientific-based approach claims that the same phenomenon observed in modern age was present during the Middle Ages, but with a relevant distinction. The phenomenon representing a continuity across time, in fact, would not be a natural disease, but a series of behaviours, which were accidentally misunderstood as related to a natural disease and which should actually be read as a non-verbal language, a corporal expression of discomfort, conflict, resistance, social suffering and so forth.

Either way, we can indeed follow Freud when he observes that these kinds of deviations, together with many others, have been easily recognized as signs of spirit possession during the Middle Ages and suffered religious-based repression, segregation and killing. On this, also the classical work of Foucault (1972) reports that between the Middle Ages and the Renaissance mad people in general (whose madness had not been defined yet as mental illness, still living aside of medicine) were assimilated to others social deviations, just like criminals, beggars, paupers, and therefore destined to the ritual separation from the social order (represented by the *stultifera navis*, by colonies, etc.). Among the people interned, one could find as well witches, demon-possessed and “hysterics”.

However, it is worth noting that if we give credit to the philological revisionism presented above, at this stage the whole debate around hysteria as a pathology is nothing but an anachronism, since its very first definition had still to come and only appeared in Europe a little later.

According to Pearce (2014), the first occurrences of the words “hysteria” and “histerical” in French and English languages date between the XVI and the XIX century:

The word ‘hystérique’ did not develop in French until 1568; the adjective ‘hysterical’ appeared in English in 1615 (Crooke): ‘Hysterical women, that is, such as are in fits of the mother’. In 1801 the noun ‘hysteria’ emerged: ‘Account of Diseases in an Eastern District of London [...] Chronic Diseases [...] Hysteria’. And French ‘hystérie’ appeared in 1812. (Pearce 2014: 2)

Hence, the birth date of the word and concept of hysteria is realistically 1801, while the mention of the word “hysterical” dates back to 1568. It’s worth noting that in the XVII century this male epistemic community produced its own standards of truth about hysteria, applying them to women as an objective, unquestioned reality.

Yet, one has to report that it was thanks to this same rising community that the so-called religious bias weakened at the end of the Middle Ages. English physician Edward Jorden (1569-1632) was in fact the first to consider the women accused of sorcery as victims of a natural disease, instead of witches. Jorden intervened several times in their defense in the trials, sustaining that women were affected by “suffocation of the mother”, retaking here literally Hippocrates’ expression (where “mother” is an archaic word for “uterus”). In his medical treatise *A Brief Discourse of a Disease called the Suffocation of the Mother* of 1603, a curious synthesis of the works of Hippocrates and Galen, mixed with observations of Jorden himself, the English physician never stops calling women’s condition by “disease”, defining it as “Passio Hysterica, Suffocatio, Proefocatio and Stangulatus Uteri”. The treatise was in fact written after the trial of Elizabeth Jackson, as Jorden tried, unsuccessfully, to prove that the accused was not possessed by the devil but suffering from a natural disease.

Newsworthy, among the external causes of the disease Jorden also suggests a

psychological origin: the “perturbations of the mind” (notice: of the mind, not of the brain). The treaty claims that according to countless historians and physicians there had already been numerous women who “have died upon joy, grief, love, fear, shame and such like perturbations of the mind” (Jorden 1603: 23).

So between the XVI and the XVII centuries the Suffocation of the Mother was resumed from the *Corpus Hippocraticum* and used to try subtract deviant women from the Church tribunals, considering their behaviours not as a mark of the devil but as symptoms of a physical illness, in particular of the uterus, with accidental involvements of the mind. But this genital localization was not meant to last long. As early as in 1618, French physician Charles Le Pois (1563-1633) suggested for the first time a relation between the Suffocation of the Mother and the nervous system, regarding in particular its convulsive manifestations. The organic explanation gradually shifted its focus from the uterus to concentrate on the nerves, the “blood composition” and the “brain filling”.

Despite the early suggestions of Edward Jorden, during the XVII century all behaviours defined as hysterical symptoms continued to be ascribed to a hypothetical, physical, organic disease. Yet, a turning point in the redefinition of this idea was marked by the work of English physician Thomas Sydenham (1624-1689). Sydenham had studied Medicine at Magdalen Hall, Oxford, in 1660 joined the Royal Society of London and in 1676 published the treaty *Observationes Medicae*, which became an absolute academic reference for the next two centuries. In 1668 also philosopher John Locke entered the Royal Society, taking part in Sydenham's researches as an intern. Based on meticulous observation of phenomena and the minimum possible speculation, the English Hippocrates' approach was destined to impact not only Locke's empiricism, but the whole broad scientific community.

Among his numerous subjects of interest we find scarlet fever, gout, Saint Vitus' dance (Sydenham's chorea), and also "Hysterick symptoms". Those last were said to be identical to what he called "Hypocondriack symptoms", suggesting the latter would be a male manifestation of the same disease. In *The Whole Works of that Excellent Practical Physician, Dr. Thomas Sydenham* (1696) we can find this clear description:

very few Women, which Sex is the half of grown People, are quite free from every Assault of this Disease, excepting those who being accustom'd to labour, live hardly; yea, many Men that live sedentary Lives, and are wont to study hard, are afflicted with the same Disease. And tho Hysterick Symptoms were always heretofore supposed to come from a vicious Womb, yet if we compare Hypocondriack Symptoms, which were thought to proceed from Obstructions of the Spleen, or Bowels, or from some other I know not what Obstruction, an Egg is scarce more like an Egg than these Symptoms are one another in all respects. (1729: 302)

Sydenham was among the first physicians to drive the attention on the male cases reporting hysteric symptoms, and even though his work maintains two different

names for the same “disease”, merely distinguished on a gender criteria, his work was ruling out the hypotheses that such situations would be all about a strictly female condition. Together with that, it also became obviously necessary to disqualify the uterus as the main responsible in the aetiology of the disease. Just like Jorden, Sydenham invited to consider the importance of emotion in the genesis of its manifestations. Indeed, this very suggestion opened the door towards a functional, and no more organic, disease definition which will be later developed in the history of medicine. In the same work, Sydenham also refers to a belief of Galen according to which nerves would be empty pipes, where an animating fluid would run (it was called “pneuma psychicon” or “animal spirit”), bringing the sense impressions to the brain:

Sydenham further maintained that hypochondria and hysteria were the same disease; female sufferers were simply hysterics, and male sufferers were hypochondriacs. His posthumously published *Compleat Method of Curing Almost All Diseases* (1693) noted of “the disease called in women Hysterical; in men the Hypochondriacal Passion” that “when the mind is disturb’d by some grievous accident, the animal spirits run into disorderly motions”. (Beatty 2015: 11)

The theory of the Spirits, whose confusion could generate the disease, is thus described by Sydenham:

the Confusion of the Spirits, the Cause of this Disease, occasions putrid Humours in the Body, by reason the Function, as well of those Parts which are distress’d by the violent Impulse of the Spirits, as of those which are depriv’d of them, is wholly perverted. (1729: 313)

The recommended therapy included the collection of eight ounces of blood from the right arm, followed by the administration of herbs purges for three or four days. Then laudanum every night, plus iron and Artemisia to strengthen the blood, although the best way to fortify the animal spirits was considered to be a horse ride

every day.

Hence we see how, still far from being identified with a noun (hysteria) and even further from being considered a “mental illness”, our disease has thus been gradually created between the XVI and XVII centuries. Via the equivocal references to Hippocrates and Galen, the Renaissance approach took the phenomenon out of the Christian beliefs to set it in a new, albeit embryonic, scientific debate.

Despite the XVII century discourse about hysteric symptoms, *passio hysterica*, suffocation of the Mother, etc., the first time hysteria was defined as nosological phenomenon in medicine was in the XIX century. Coincidentally, this was also the time when physicians started to look closely at madness, which was on its way to be interpreted as a kind of illness. From the union of an incipient neurological approach to behavioural dysfunctions and this new medical attention towards madness, numerous theories and definitions arose regarding nervous crises. Among them, the definition of hysteria as a proper, independent disease was about to come.

In 1793 Philippe Pinel for the first time separated the “madmen” from the other socially deviant subjects in the asylum of Bicêtre, France. In his 1801 work *Traité médico-philosophique sur l'aliénation mentale ou la manie*, he claimed that “The insane, far from being culprits who need punishment, are patients whose sad state deserves all the consideration due to suffering humanity, and whose lapsed reason one must seek to restore by the simplest means” (Pinel 2008: 152).

The idea that lost reason could be restored, instead of being lost once and for all, was an absolute innovation which inaugurated the use of medical knowledge and treatment in respect of the “madmen”. Moreover, Pinel argued that one could not understand the very idea of alienation without confronting the cause which most frequently laid beneath it: violent passions or exasperated by contradictions (Pinel 2008: 82). Pinel intended to cure his “serious fools” by interviews, “moral therapies”, ergotherapy, leeches, opium, purges, isolation and contention. However, although his revolutionary ideas about a restorable reason via a moral treatment, later sistematised by psychoanalysis, with regard to the behaviours earlier interpreted as hysterical symptoms, he simply collected them under the category of “genital neuroses” (Palano 2002: 200; Bogousslavski 2014: 181, 197).

A little later, between 1872 and 1878 it was the French neurologist Jean-Martin Charcot (1825-1893) who actually formulated, defined and described an independent disease called “hysteria” for the first time in medicine. Charcot took service after Pinel at the hospital of Salpêtrière, in Paris, where he was assigned to the convulsions division as chief of internal medicine. Here, he separated epileptics and hysterics (Albengres 2002), described the symptomatology of hysteria and distinguished its permanent and temporary expressions. He also used photography to document hysterical crises, creating a vast visual catalog of the phenomenon encouraging his patients to pose theatrically in front of the camera (Didi-Huberman 1982). Charcot was primarily treating encephalitis, Parkinson, sclerosis, hemiplegia and also was the first to adopt hypnosis as healing method to treat hysteria. In 1882 he published the essay *Sur les divers états nerveux déterminés par l'hypnotisation chez les hystériques*, he confirmed the belonging of hysteria to neuropathology and in the same year transformed the Salpêtrière in a proper neuropathology institute, where he created and directed a professorship of neurology. He believed hysteria was a proper disease caused by a hereditary degeneration of the nervous system, but had no clue about its material origins. In his own words, from 1892: “We do not know anything about its nature, nor about any lesions producing it; we know it only through its manifestations and are therefore only able to characterize it by its symptoms” (Charcot & Marie 1892: 628). As stated by historian Mark Micale, the main issue with this illness has always been its “missing lesion”, an absence that gave way to the most various theoretical speculations:

Theorization on the subject was dominated by Charcot, the celebrated Parisian neurologist who in the late 1870s and 1880s formed a coterie of young doctors and medical students around him at the Salpêtrière hospital to investigate in enormous and systematic detail what he christened “the Great Neurosis”. [...] Nonetheless, nineteenth-century theories of hysteria remained wholly speculative. [...] Nineteenth-century doctors hypothesized about whether hysteria derived from an anatomical lesion, a molecular change, a nutritional deficiency, or an

electrophysiological irregularity of the brain, but inconclusively (Micale 1993: 503).

Yet, also within the epistemic community which formulated the very category of hysteria as a disease there was no full consent regarding its nature and status. Not even about it being an illness.

In those same years, Charcot's most brilliant colleague and disciple Joseph Jule François Félix Babinski (1857-1932) was radically denying the fact of hysteria being a disease *tout court*. He claimed that the hysterical manifestations, until then taken as symptoms, belonged to a pathological state to be related with artificial creations induced by suggestion. Hyppolite Bernheim (1840-1919), Professor of Medicine at Nancy University, shared his opinion and soon provided demonstration that the phenomena observed during the hypnotic treatment of Charcot would only happen when the patients knew they had to happen, supporting thus the argument of suggestion (see Hammer & Orne 2025; Szasz 1974: 40-1). In recent years, psychiatrist Thomas Szasz as well placed some emphasis on the inner conflicts regarding the methodology of analysis within the French School:

during Charcot's lifetime and at the height of his fame, it was suggested, particularly by Bernheim, that the phenomena of hysteria were due to suggestion. It was also intimated that Charcot's demonstrations of hysteria were faked, a charge that has since been fully substantiated. Clearly, Charcot's cheating, or his willingness to be duped [...] is a delicate subject. It was called "the slight failing of Charcot" by Pierre Marie. Guillaumin, more interested in the neurological than in the psychiatric contributions of his hero, minimized Charcot's involvement in and responsibility for faking experiments and demonstrations on hypnotism and hysteria. But he was forced to concede that "Charcot obviously made a mistake in not checking his experiments. [...] Charcot personally never hypnotized a single patient, never checked his experiments and, as a result, was not aware of their inadequacies or of the reasons of their eventual errors". (Szasz 1974: 28-29)

Furthermore, as early as 1904 we have the first statement about the decline of hysteria as a nosological category. German physician Armin Steyerthal "predicted in

a pamphlet entitled *What Is Hysteria?* that ‘within a few years the concept of hysteria will belong to history [...] There is no such disease and there never has been’” (found in Micale 1993: 501). In a way, he was not far from the truth, although the category happened to resist until 1987 in the DSM of psychiatry and has been yet diagnosed worldwide in the late 1980s (see in particular the Malaysian case of “mass hysteria” reported by Aihwa Ong: 1989).

Still, although during the second half of the XIX century doctors considered the newborn hysteria as the most common nervous disease among women, the diagnosis was almost gone a few years later: “the decline of hysteria as a workaday diagnosis within European and North American medicine occurred rapidly after the turn of the century and was effectively complete by World War I” (Micale 1993: 501).

In May 1908, eight years after the death of Charcot, Babinski proposed to the members of the Paris Neurological Society to discard the term “hysteria” altogether. In his *Définition de l’hystérie* (1901) he proposed to start using the term *pithiatism* instead, meaning a curable form of persuasion:

Dominated by Babinski, one member of the group after another took the floor and publicly denied that these classes of symptoms could be hysterogenic. [...] Many members confessed openly to what they now regarded as the misdiagnosis of many cases from their earlier medical practice. The meeting on 14 May dealt with the eight topic on the questionnaire: “Faut-il conserver le mot Hystérie?” [...] Everyone present agreed that hysteria had previously been defined much too elastically. [...] Exactly fifteen years after Charcot’s death, the most prestigious professional organization in French neurology dismantled the Salpêtrian model of hysteria, symptom by symptom, in two days, just as Charcot had constructed it with such care over two decades. (Micale 1993: 519)

Lastly, Micale’s historical survey suggests to take in consideration the gradual absorption, in the late XIX century, of the supposed “hysterical symptoms” by other medical categories. Changes in diagnostic technique and the rise of microscopical observation led to different interpretation of the behaviours and cases earlier considered hysterical. Babinski’s toe reflex made it possible to distinguish

cerebrovascular paralyses (organic ones) in the vast ocean of hysteria diagnosis. The 1905 observation of *Spirochaeta pallida* made it possible to identify syphilis, slowly taking away even more cases from hysteria's basket. The third great category receiving hysteria's patients was then epilepsy.

Nonetheless, the idea of hysteria was not yet about to die. From Paris to Vienna, hysteria was just about to start a brand new life, jumping from organic materialism towards metaphysics, without abandoning the field of medicine.

While Pierre Briquet was still claiming that hysteria would be a neurosis of the brain (1859), providing the basis for the modern-day somatic symptom disorder, inside the Pitié-Salpêtrière another view would rise in Charcot's circle: the one of French physician, philosopher, psychologist and psychotherapist Pierre Janet (1859-1947). Precisely with the medical thesis *L'état mental des hystériques*, of 1893, Janet started to define a new orientation of research, following some more ancient intuitions of Sydenham and Jorden: the mind instead of the body, and more particularly memory, were responsible of the behaviours grouped under the label of "hysteria". In his *The major symptoms of hysteria: fifteen lectures given in the Medical School of Harvard University* (1907), Janet broadly defined hysteria as "a malady of the personal synthesis", and more precisely as follows:

hysteria is a form of mental depression characterized by the retraction of the field of personal consciousness and a tendency to the dissociation and emancipation of the systems of ideas and functions that constitute personality (Janet 1920: 332).

Here a radically new interpretation of the phenomenon was given: hysteria would be a disease of personality, of the mind in relation with the world, with the others and ourselves. Out of a sudden, in the same century when Charcot was medically describing and institutionalizing hysteria as a corporal disease of the nervous system, while Babinski and Steyerthal were denying it being an illness, Janet claimed hysteria would not really be a disease of the body (not of the uterus, brain nor nervous system), but a malady of the mind, of the soul, of personality. Janet was the first to claim the psychogenesis of hysteria, and his proposal included the definition of a new category: *psychastenia*, a label grouping symptoms as phobias, obsessions, compulsions, anxiety, thus largely embracing many behaviours attributed to hysteria.

Some of these XIX century approaches would soon be resumed in the work of Sigmund Freud.

In 1909 Babinski published his medical essay *Démembrement de l'hystérie traditionnelle: Pithiatisme*. In 1903, Janet had published *Obsessions and Psychastenia*, and developed a model of the mind and personality (a metapsychology) articulated in social terms, which would become the basis for all the psychological theories from there onwards. But while hysteria was just about to be left behind by its French fathers, this very diagnosis gained new life within German speaking medicine and psychiatry.

Although widely considered absolute pioneering, the theories of the Austrian neurologist Sigmund Freud (1856-1939) were largely based on the works of his colleagues and mentors, namely Bernheim, Charcot, Janet, Breuer (1842-1925) and Bleuler (1857-1939). Freud actually represents the greatest filter and funnel of the tradition before him. Still supporting Charcot's nosographical classification of hysteria as a morbid neurological phenomenon, Freud inaugurated a systematic analysis of the thoughts of hysterics: psychoanalysis. Adopting Janet's intuition as for the psychogenesis of hysterical behaviours, Freud started to investigate the mental language of his patients, the symbols of their dreams, the logic of free association of thoughts and images and their erotic impulses by mean of dialogue as therapy. Ridiculed by many contemporaries, Freud developed a theory of the unconscious to propose a psychological etiology of hysteria.

Those ideas were not new, being rather developments and applications of Janet's work. Freud himself declares it in *A Note on the Unconscious*, when he states: "the theory of hysterical phenomena first put forward by P. Janet and elaborated by Breuer and myself" (Freud 1981, vol. XII: 261). Also the concept of the "unconscious" was actually based on Janet's first idea of a "subconscious", a term he created together with the concept of "dissociation". Restoring some Janet's intuitions, already present in Pinel, Freud also transported the medical concept of *trauma* (wound, injury, lesion) from the physical, organic framework to the psychological dimension (on this, see Hacking 1995), converting trauma into a metaphor and looking for the psychical events, the unsolved contradictions, the repressions and conflicts at its origin. Psychoanalytical approach targeted the social reintegration/reeducation of the individual by means of a dialogical treatment, namely

to reveal and express the inner conflicts that caused psychological disorders:

In the course of our investigation into the aetiology of hysterical symptoms, we also came upon a therapeutic method which seemed to us of a practical importance. For we found, to our great surprise at first, that *each individual hysterical symptom immediately and permanently disappeared when we had succeeded in bringing clearly to light the memory of the event by which it was provoked and in arousing its accompanying affect, and when the patient had described that event in the greatest possible detail and had put the affect into words.* (Freud 1981, vol. II: 255, italics in the original)

Albeit the suggestions that emotion could have a relevant role in the triggering of hysterical crises were already coming from Jorden, Sydenham, Janet and Pinel, it is with Freud that for the first time a doctor, a physician tried to systematically access the mental world of a patient, under the belief that psychic torment was generated by the tension and contradiction between individual impulses, desires, feelings and the rules imposed by social life and structure (Freud 1981).

From the womb to the devil's influence, from blood fluids and suggestion to the brain and the nervous system, on the verge of the XX century the nomadic origin of hysteria was moving towards the abstract location of the mind, of the psyche, of human consciousness and personality without even changing its name.

Sigmund Freud united therefore the psychological approach of Janet (a theory of the mind, the role of memory), the hypnotic techniques of Breuer (the induced access to the unconscious, the alteration of the state on consciousness, the therapeutic talk) as well as Charcot's case studies and nosographical definitions (the medical corporeity, the catalogue of behaviours read as nervous pathology signs). He also maintained untouched the idea of the inheritance of the disease, as presented by Charcot:

Hysteria must be regarded as a status, a nervous diathesis, which produces outbreaks from time to time. The aetiology of the status hystericus is to be looked for entirely

in heredity: hysterics are always hereditarily disposed to disturbances of nervous activity, and epileptics, psychical patients, tabetics, etc., are found among their relatives. Direct hereditary transmission of hysteria, too, is observed, and is the basis, for instance, of the appearance of hysteria in boys (from their mother). Compared with the factor of heredity all other factors take a second place and play the part of incidental causes, the importance of which is as a rule overrated in practice. (Freud 1981, vol. I: 50)

He also maintained a clear gender discrimination: yet denying that neuroses had anything to do with the womb, Freud claimed that male nervous system had a natural disposition towards neurasthenia as female one had towards hysteria (1981, vol. I: 53), keeping the attribution of the category focused on women. When dealing with men, he would also specify they were cases of “male hysteria”, thus confirming a gender bias. The distinction so far reified in the uterus was now expressed by the alleged “dispositions” of the nervous system.

In the same century, the German neuropsychiatrist Ernst Kretschmer (1888-1964), professor at the Tubinga Psychiatric Clinic, argued that “hysteria” would be a way to act (or better react) at the disposal of any human being. He claimed that it was determined by biological preformed mechanisms and studies the correlations between individual constitution, psychic personality and predisposition to mental illnesses (Kretschmer 1960). Braun, instead, proposed that this dysfunctional state was caused by epitimia, a semiconscious elaboration of emotive events, having registered similar elementary reactions in animal behaviours when exposed to harmful stimulation.

The last hysteria theory we will mention, before the category definitely disappeared from medicine, was proposed in the XX century within psychiatry. In 1952, the American Psychiatric Association published the DSM - *Diagnostic and Statistical Manual of Mental Disorders - The standard classification of mental disorders used by mental health professionals in the U.S.*, then spread to other countries starting from 1980, with the third edition.

In the late XIX century hysteria was embracing conditions later included under the DSM dissociative disorders as: somatic symptom disorder, conversion disorder, borderline personality disorder and post-traumatic stress disorder.

Left out of neurology due to the missing lesion evidence, hysteria was adopted as a nosographical category by the newborn medical branch of psychiatry. Yet, the first edition of the DSM did not mention hysteria in the catalog of mental disorders:

in the second edition of DSM, which had a more psychoanalytical orientation, hysteria came back as neuroses and hysterical neuroses, being divided into conversive and dissociative types. Contrary to the DSM-I, this second edition admitted hysteria also as personality disorder, the so called hysterical personality (nowadays histrionic personality disorder). (Ávila & Terra 2010: 337)

Curiously, it was long after the phenomenon had already vanished in European medicine that U.S. psychiatry went back to recover it, furthermore placing it in a descriptive tool which would quickly become an international reference for the diagnosis of mental disorders by physicians on a global scale.

Nonetheless, at the same time, throughout the XX century the very concept of mental illness in medicine was undergoing a profound criticism from many sides. In particular, in 1961 the Hungarian-American psychiatrist and psychoanalyst Thomas Szasz published *The Myth of Mental Illness*, a work containing a new interpretation of hysteria and a strong epistemologic critique to the concept of “mental illness”. On the

one hand, Szasz read hysterical behaviours as a non-verbal language, on the other hand, he claimed there was no such a thing as mental illness a physician could possibly deal with:

The claim that “mental illnesses are diagnosable disorders of the brain” is not based on scientific research; it is a lie, an error, or a naive revival of the somatic premise of the long-discredited humoral theory of disease. My claim that mental illnesses are fictitious illnesses is also not based on scientific research; it rests on the materialist-scientific definition of illness as a pathological alteration of cells, tissues, and organs. If we accept this scientific definition of disease, then it follows that mental illness is a metaphor, and that asserting that view is stating an analytic truth, not subject to empirical falsification. (Szasz 2011: 179-180)

Together with this ontological and epistemological readjustment between medicine and psychiatry, brain and mind, came the invitation to consider the setting of a twilight zone for the action of psychiatry within the patient’s life:

Psychiatry, I submit, is very much more intimately tied to problems of ethics than is medicine. I use the word “psychiatry” here to refer to that contemporary discipline which is concerned with problems in living (and not with diseases of the brain, which are problems for neurology). (Szasz 1974: 116-7)

Szasz argued that mental illness is a metaphor for human problems in living. Mental illnesses are not “illnesses” in the sense that physical illnesses are; and “except for a few objectively identifiable brain diseases, such as Alzheimer’s disease, there are neither biological or chemical tests nor biopsy or necropsy findings for verifying or falsifying DSM diagnoses” (2008: 2). With regard to hysteria, Szasz proposed to look at the “hysterical behaviours” from the point of view of a social semiotic, as nondiscursive language. Crisis, local paralysis, loss of sensitivity, outbreaks would be nothing more than signals, icons, symbols representing a ritual form of expression of conflicts, sufferings, inner contradictions, traumatic experiences stated in a body

language. The interpretation goes as follows:

To exhibit, by means of bodily signs—say, by paralyses or convulsions—the idea and message that one is sick is at once more impressive and more informative than simply saying: "I am sick". Body signs portray—they literally present and represent—in exactly what way the sufferer considers himself sick. In the symbolism of his symptom, the patient could be said to present his own complaint and—albeit in a highly condensed form—even his autobiography. (1974: 27-8)

Considering nondiscursive languages as oriented to the expression of emotions more than to the transmission of an information, Szasz invited the medical and State authorities to reconsider the very core of therapeutic relation and illness attribution:

Evidently, in the modern world many people prefer to believe in various kinds of mental illnesses, such as hysteria, hypochondriasis, and schizophrenia — rather than admit that those so diagnosed resemble plaintiffs in courts more than they do patients in clinics, and are engaged in making various communications of an unpleasant sort, as might be expected of plaintiffs. (1974: 119)

Thus, according to Szasz, one should try to interpret this nondiscursive language, more than diagnose pathologies based on (not understood yet) human behaviours:

All the evidence is the other way and supports the view that what people now call mental illnesses are for the most part communications expressing unacceptable ideas, often framed, moreover, in an unusual idiom. (1974: 116)

What Szasz did with hysteria was part of a larger movement, also called antipsychiatry, which was inviting society to question psychiatric authority in

attributing diagnosis and to consider behavioural disorders as signs of existential problems instead of medical pathologies. Among the most evident cases of psychiatric misunderstanding of human behaviours we'll notice the DSM nosographical category for homosexuality, scientifically considered a mental illness for decades and medically diagnosed accordingly.

Similarly to Szasz with hysteria, Scottish psychiatrist Ronald David Laing (1927-1989) and Aaron Esterson (1923-1999) in *Sanity, Madness and the Family* (1964) delegitimized the nosographical category of schizophrenia, suggesting the etiology of their patients' disturbs was actually the repression and rejection of their identity within their families. International public debate grew while Italian communitarian psychiatry, led by psychiatrist Franco Basaglia, was questioning the purpose of asylums and finally brought to their closure. On the wave of this wide revision, hysteria vanished once for all from the catalogue of medical nosological categories:

Under the pressure of public opinion, which considered the word "hysteria" as stigmatising, the équipe who drafted the DSM-III accomodated hysteria in various compartments, abolishing it from psychiatric nomenclature. [...] In 1993, with the 10th edition of the International Statistical Classification of Diseases and Related Health Problems (CID-10) by the WHO, and in 1994, with the 4th edition of DSM-IV it was established the end of the category of hysteria, together with its redesignation under new diagnostic classifications. (Ávila & Terra 2010: 337-334)

A SURPRISINGLY RESILIENT CONCEPT

By way of conclusion, we may observe again that contemporary editions of DSM and ICD, together with the broad medical community, desisted from using the word “hysteria” any longer, erasing it from the book and distributing its former symptoms into the three categories of somatic symptom disorder (a derivation from Briquet’s syndrome), dissociative disorder and conversion disorder, mainly caused by “long term stress”. All sorts of reasons were paving the way towards the end of this category: a remarkably embarrassing gender bias, the unsolved problem of the missing lesion, striking philological misunderstandings, core conflicts between its creators, etc. Nonetheless, still in 2021 one could read in the «Journal of International Medical Research» an article entitled *Mass hysteria attack rates in children and adolescents: a meta-analysis*.

Furthermore, while the DSM editorial board killed its rejected creature (or just changed its name?), popular and psychoanalytical tradition still maintains it there. A search of the entry “hysteria” in various dictionaries shows that this word and concept is still alive and well, offering definitions as the following:

Hysteria. Noun.

- 1: a psychoneurosis marked by emotional excitability and disturbances of the psychogenic, sensory, vasomotor, and visceral functions;
- 2: behaviours exhibiting overwhelming or unmanageable fear or emotional excess.

(Merriam-Webster, Accessed Jan. 2025)

Running into this definition in 2025 one may ask: will society ever get rid of such an idea? And if not, as it seems to be the case, what are we to make of this most resilient ghost, neglected child of the Renaissance scientific method?

And so it is: the burning reality [...] is nothing but an imperfect reverberation of former discussions. Hitler, dreadful with his public armies and secret spies, is a pleonasm of Carlyle (1795-1881) and even of J.G. Fichte (1762-1814); Lenin, a transcription of Karl Marx. That is why the true intellectual eschews contemporary debates; reality is always anachronous. (Borges 1964: 132)

CHAPTER 2 ²

PSEUDOSCIENCE CHARGES AND THE DEMARCATION PROBLEM

RESUME

After having drawn the historical revision of the concept of hysteria, highlighting the strategic selection of descriptions and models recuperated overtime to create the impression of a stable medical tradition, we now take the nosological category as a case study to address the philosophical debate around the demarcation problem.

Psychiatrist Thomas Szasz stated that the fact of dealing with entities called “mental illnesses” would place psychiatry next to astrology in the realm of pseudosciences. Accordingly, hysteria would come to represent a pseudoscientific object. We here evaluate whether or not such claim could represent a legitimate answer to the questions about the status and reality of such nosological category.

Philosophers of science have long tried to identify some demarcation line capable of distinguishing science from pseudoscience. Nonetheless, no ultimate set of requirements has so far been achieved, leaving demarcation uncertain and fluctuating, if not merely rhetorical. The habit of using the word ‘science’ to address a specific kind of knowledge is in fact a modern practice, with ‘science’ having gradually taken over terms like ‘natural philosophy’ and ‘natural history’. Thereby, the term ‘pseudoscience’ is also a recent one, with its meaning running alongside scientific

² The content of this chapter has been published as *Pseudoscience Charges and the Demarcation Problem*, in «Acta Baltica Historiae et Philosophiae Scientiarum», Vol. 11, No. 2 (Autumn 2023), pp. 3-31. DOI: [10.11590/abhps.2023.2.01](https://doi.org/10.11590/abhps.2023.2.01)

endeavours of the XIX century. This second chapter contributes to the debate aiming to pragmatically describe the function of pseudoscience in epistemology. We defend that claims of pseudoscience are used to discredit (rightfully or not) specific practices and theories as non-legitimate, and to defend others as legitimate. To account for this, we argue that questions like *What is pseudoscience?* or *What makes science science?* would be better replaced by the question *What do people do with the word pseudoscience?*

INTRODUCTION

If you say that there was a full moon on February 1st and another on March 1st; and then you link these two observations together in any way, the statement which links them is an hypothesis.

(Bateson 1972: 39)

We would like to raise the topics discussed in this chapter by quoting again a singular claim found in the literature of psychiatry and presented in the previous section. The subject is an interesting case of a pseudoscience charge involving the erasure of the nosological category of hysteria. Among the forerunners of the revision, we find psychiatrist Thomas Szasz, a professor at New York State University, well known as social critic of the moral and scientific foundations of psychiatry. Long before the scientific community realized that medical categories like hysteria, homosexuality, or multiple personality had little, if any, scientific foundation, Szasz entered the debate precisely adopting a charge of pseudoscience.

In his 1961 book, dedicated to an unconventional interpretation of hysteria, Szasz stated:

Psychiatry is conventionally defined as a medical speciality concerned with the diagnosis and treatment of mental diseases. I submit that this definition [...] places psychiatry in the company of alchemy and astrology and commits it to the category of pseudoscience. The reason for this is that there is no such thing as “mental illness”. (Szasz 1974: 455)

The statement is interesting for a number of reasons. First, we have a

physician and psychiatrist³ claiming that an established assumption at the foundation of his own discipline makes it a pseudoscience. Quite a radical criticism indeed. In fact, while the author could have argued that such a claim was just wrong, biased or unjustified, he called for a bold distinction between fields: science against pseudoscience. What kind of a statement is that, and what sort of charge does it imply? Is it a descriptive allegation or rather a normative one?

Elsewhere, Szasz pushed his criticism towards taxonomic matters too, broadly questioning the scientific “discoveries” of DSM diagnoses:

Except for a few objectively identifiable brain diseases, such as Alzheimer’s disease, there are neither biological or chemical tests nor biopsy or necropsy findings for verifying or falsifying DSM diagnoses. [...] However, the APA did not declare hysteria to be a nondisease; instead, it renamed it “conversion reaction” and “somatization disorder.” Similarly, in 1973, when the APA removed homosexuality from its roster of mental illnesses, it first replaced it with ego-dystonic homosexuality; when that term, too, became an embarrassment, it too was abolished. However, psychiatric researchers lost no time “discovering” a host of new mental maladies, ranging from attention deficit hyperactivity disorder to caffeinism and pathological gambling. (Szasz 2008: 2)

Szasz is not alone in blaming psychiatry for its lack of scientificity, nor is the issue an outdated one. Quite the opposite. Albeit not involving any pseudoscience charge, contemporary researchers are still addressing such criticism, claiming that the disjunctive categories of DSM are “scientifically meaningless” (Allsopp et al. 2019: 15) and that several other constructs actually do not exist (van Os 2016).

³ Apparently, the distinction is an appropriate one. Entry 1509 of the University of California STEM disciplines listing shows the need for distinguishing and uniting medicine and psychiatry, with a quite unique remark among scientific specialities.

Echoing similar concerns, James Ladyman wrote:

In psychiatry not that long ago women in the UK were incarcerated for what is now considered nothing more than a healthy interest in sex. Until 1973, the American Psychiatric Association regarded homosexuality as a mental disorder. And surely some medical researchers are corrupted by corporate interests and either exaggerate the efficacy of potential lucrative treatments or downplay or deny their negative effects. (Ladyman 2013: 58)

However, most relevantly, neither homosexuality nor hysteria have been withdrawn from the DSM because of an advance in theory, contrary evidence, or experiments performed, nor by reason of a shift in scientific paradigms and methods within psychiatry, but rather because of a change of narrative due to the impact of feminist movements. Does that validate Szasz's statement? Or should we enrich our classification to distinguish, as some theoreticians do, between pseudoscience, bad science, and non-science instead? (Pirosca et al. 2022; Mathew 2020; Nickles 2013)

Szasz's statement also identifies astrology, alchemy, and psychiatry as pseudosciences, predicated on a sentence they may contain, or an assumption they would rest upon. This implies that, within a logical-linguistic approach to scientific models, the modification of a claim within a theory can shift the boundary between science and pseudoscience—an allegation which is worth an analysis. Furthermore, Szasz concisely identifies the category of pseudoscience as a whole, leaving us with the task of defining what can bring together alchemy, astrology, and psychiatry under such a unified label⁴. Indeed, we have as many reasons to doubt the scientific status of

⁴ The word category is not used in a historical-philosophical perspective. It does not refer to the twelve Kantian a priori forms of knowledge, nor to the five Platonic determinations for the intelligible realm, or to Sophistical or Aristotelian doctrines. The "category of pseudoscience" seems to be intended as a mere partition in which things and elements of the same nature or kind are tautologically included.

psychiatry as there are to refuse it to astrology, but is there any specific feature that all so-called pseudosciences may share?

Partially answering some of these questions (while motivating more), in a later publication Szasz sheds light on his personal demarcation policy in medicine—including psychiatry. His criterion is indeed a philosophical one, to some extent ascribable to Popper's proposals and further related to the modern materialist reduction paradigm. As mentioned in chapter one, thus he writes:

The claim that "mental illnesses are diagnosable disorders of the brain" is not based on scientific research; it is a lie, an error, or a naive revival of the somatic premise of the long-discredited humoral theory of disease. My claim [...] rests on the materialist-scientific definition of illness as a pathological alteration of cells, tissues, and organs. If we accept this scientific definition of disease, then it follows that mental illness is a metaphor, and that asserting that view is stating an analytic truth, not subject to empirical falsification. (Szasz 2011: 179)

Materialist reductionism and empirical falsification are mentioned as demarcation criteria. We can understand why Szasz still held the distinction between brain diseases and mental disorders: after all, if the concern were brain diseases, those would be treated by neurology, not by psychiatry. However, since mind was the subject, how could scientists think about the abstract mind adopting devices developed for and from the material body? The contradiction between methods and object is strikingly evident. Yet, is it enough to define a pseudoscience? Ultimately, that principle proved to be too stringent, as no evidence suggests that science should be strictly confined to materialism. Slipping away from materialist reductionism may not be a sufficient condition to justify the label of pseudoscience.

To make the picture even more complex, as noticed by Feyerabend (1975), the

coexistence of conflicting methodologies and theoretical contradictions is fully intrinsic to science at any stage of its history and, for some reason, it is only philosophers who tend to struggle with it. Also, he critically claimed that philosophers simply do not have the tools to address topics they do not fully understand. Science represents for him a whole culture on its own, irreducible to other disciplines. Feyerabend is not alone in claiming that the demarcation problem is a dilemma only among philosophers. Sven Ove Hansson recently echoed that idea:

Scientists have no difficulty in distinguishing between science and pseudoscience. We all know that astronomy is science and astrology not, that evolutionary theory is science and creationism not, and so on. A few borderline cases remain (psychoanalysis may be one [...]) but the general picture is one of striking unanimity. (2013: 61)

The reason why philosophers have so far missed the target, according to Hansson, is that they have been searching for a criterion “on the wrong level of epistemological specificity.” However, the problem does not seem to involve philosophers only, for scientists as well, as proved by Szasz, diverge dramatically in considering the status of specific cases. Seen up close, the picture does not look unanimous at all. So how should we understand and justify the use of the category of pseudoscience?

In the 1980s, while no conclusive step had been taken into the issue, Larry Laudan (1983) argued that the demarcation problem was an unfounded one, and ought to be abandoned along the categories of pseudoscience and non-science. Truly, so far none of the proposals for a demarcation criterion managed to meet a consensus, for every and any of those criteria revealed some fatal deficiencies. Nonetheless, despite Laudan, philosophers do not seem to be willing to give up the challenge and scientists themselves keep on making pseudoscience accusations both in public and scientific

debate. And that despite the profound confusion over its meaning. In fact, both the climate change theory (Schipani 2017) and climate change denialism have been called a pseudoscience over time, and recently we could read in «The Lancet» that a Nobel laureate had fellow scientists “accusing him of promoting dangerous pseudoscience” (Kazi & Mushtaq 2022: 458) due to a research program he was pursuing.

How is that possible? Does holding a potentially erroneous belief automatically qualify one a pseudoscientist? Apparently not, for it is well known that Albert Einstein believed in a static eternal cosmos, without a Big Bang, until Hubble showed him contradicting evidence. Yet, no one considered him a pseudoscientist due to his stubbornness about the cosmological constant, a belief he held that outright contradicted his own equations. Nor has he been called a pseudoscientist for having returned to that first idea later in his life. So, again, what is the logic behind distinguishing between science and pseudoscience, if any?

Contemporary researchers are defining various multi-criteria approaches, taking into account many other elements in their puzzles, such as the distinction between science and the sciences, the consideration of single scientists, the interaction among sciences, the role of “scientific communities” and their agenda, the power structures in, around, and between scientific disciplines, bad sciences, science frauds, biases, and more. Do any of these proposed approaches shed light on the nature of the category of pseudoscience? We argue there are reasons to doubt this, and that the tools and criteria elaborated to define what makes science science have little to do with the category of pseudoscience.

One additional consideration, if we step back from the initial assertion: alchemy is there grouped together with psychiatry and astrology as a striking example of pseudoscience. However, if we consider alchemy in the light of its evolution over time, namely as a direct precursor to modern chemistry, why should we define it as pseudoscience and not, let us say, a protoscience? (See Mahner 2013). What conditions are sufficient and necessary to sort these theories and practices into the

right folder?

To consider those questions, we will revisit the beginnings of the demarcation problem, to then examine some of the main steps that have recently been taken towards a solution in the philosophy of science, comparing these with historical and contemporary instances challenging their success. We will argue that the reason for being of the category of pseudoscience in epistemology is precisely the absence of such a final dogmatic set of criteria—in other words, the absence of a clearcut identity within science is the cornerstone of pseudoscience.

KANT'S PROBLEM, POPPER'S PROBLEM

*Whenever you get two people interpreting the same data in different ways,
that's metaphysics.*

(Thomas Kuhn, in Horgan 2012)

Some of the problems concerning the use and the status of the pseudoscience label date back to the first employment of this very category in philosophy. An unsolved confusion over the borders between science and its values, and between logics and ethics, gave rise to the several nuances of the demarcation problem within the philosophy of science.

When he first launched the demarcation problem, Sir Karl Popper was not thinking of (or at least, not writing about) pseudoscience. The project he initially embarked on concerned the search for a tool theoretically capable of discerning empirical sciences from mathematics, logic, and metaphysics:

The problem of finding a criterion which would enable us to distinguish between the empirical sciences on the one hand, and mathematics and logic as well as 'metaphysical' systems on the other, I call the problem of demarcation. This problem was known to Hume who attempted to solve it. With Kant it became the central problem of the theory of knowledge. If, following Kant, we call the problem of induction 'Hume's problem,' we might call the problem of demarcation 'Kant's problem.' (Popper, 1959 [1934]: 11)

His concern was directed against positivist empiricists and the application of inductive logic as a demarcation criterion, which, in his view, introduced metaphysics

straight into empirical sciences. The issue was strictly related with the Humean problem of how to justify “reasonable belief” without entering a logical infinite regress, for in order to rationally justify inductive inferences, a principle of induction is needed. However, a principle of induction must be a universal statement and if one wants it to be known by experience, she or he would need to justify that statement too by an inductive inference, to justify which new (higher) induction principle is required, and so on.

In challenging inductionism, Popper sought a solution to Kant’s problem of the limits of scientific knowledge without involving an a priori universal causation. To do that, he needed to trace the differences between those statements belonging to the empirical sciences, and other statements he describes as “metaphysical,” “meaningless,” or “pseudo-statements.” The main setting, and the greatest challenge, of this venture was the set of rules, limits, and possibilities of the connections between a logical-linguistic model and nature, enabling the former to represent, reflect, describe, or correspond to the latter by means of observation. In other words, how to reduce the laws of nature to observational statements and thus rule out metaphysical utterances for good:

My business, as I see it, is [...] to define the concepts ‘empirical science’ and ‘metaphysics’ in such a way that we shall be able to say of a given system of statements whether or not its closer study is the concern of empirical science. (Popper, 1959: 15)

To deal with this issue, Popper thus developed a “deductive method of testing” theories against nature. To test a theory, one should deduce its consequences, logically fostering conclusions until a risky prediction is reached. This prediction statement has to be tested against nature. The statement would then be verified or

falsified, and since a scientific theory is for Popper a system of statements, the whole architecture could be either verified or falsified. Popper proposed to reverse the testing method towards deduction. Therefore, to test a theory, one should not follow the course of induction (1) but the deduction process (2):

(1)

Observation > Pattern > Hypothesis > Theory

(2)

Theory > Hypothesis > Observation > Confirmation / Confutation

Distrusting verificationism due to its confirmation bias, he suggested that the only way to prove whether or not a sentence belonged to empirical science, instead of “meaningless metaphysics,” was falsificationism:

According to this criterion, statements, or systems of statements, convey information about the empirical world only if they are capable of clashing with experience; or more precisely, only if they can be systematically tested, that is to say, if they can be subjected (in accordance with a ‘methodological decision’) to tests which might result in their refutation. (Popper 1959: 315)

By choosing a method that attributed the hallmark of “empirical” only to those statements and theories capable of advancing the conditions for their confutation, Popper thought he had revolutionized epistemology. In fact, in his ambitions, falsificationism would have solved both Hume’s and Kant’s issues at once, id est, both the induction and the demarcation problem:

the recognition of unilaterally decidable statements allows us to solve not only the problem of induction [...], but also the more fundamental problem of demarcation, a problem which has given rise to almost all the other problems of epistemology. (Popper 1959: 315)

Still, along *The Logic of Scientific Discovery*, the word ‘pseudoscience’ does not show up, not even once. It is in *Conjectures and Refutations* (1962) that Popper modulates his former demarcation proposal by establishing new terms for framing the dispute—the new lexicon for the demarcation venture proposed the separation of science and pseudoscience: “I wished to distinguish between science and pseudo-science; knowing very well that science often errs, and that pseudo-science may happen to stumble on the truth” (Popper 1962: 32–33). Here, Popper also declared his interest towards Einstein’s theory of relativity, Marx’s theory of history, Freud’s psychoanalysis, and Adler’s individual psychology. While having no doubt about the scientific status of Einstein’s relativity, he was sincerely worried about the blind faith demonstrated by his friends and colleagues towards the theories of Marx, Freud, and Adler:

I found that those of my friends who were admirers of Marx, Freud, and Adler, were impressed by a number of points common to these theories, and especially by their apparent explanatory power. These theories appeared to be able to explain practically everything that happened within the fields to which they referred. The study of any of them seemed to have the effect of an intellectual conversion or revelation, opening your eyes to a new truth hidden from those not yet initiated. Once your eyes were thus opened you saw confirming instances everywhere: the world was full of verifications of the theory. (Popper 1962: 34–35)

The theory of relativity, by contrast, appeared to be safe from this verification bias precisely because it was vividly incompatible with certain possible results of observation. For the above reasons, the theory of general relativity had to be considered scientific, while Marxism, individual psychology, and psychoanalysis were pseudoscientific, therefore to be grouped together with alchemy and astrology.

Yet, although logically seductive, falsificationism provided no final solution to the problem. In fact, besides having led Popper to describe Darwinism as a metaphysical research program (a 1976 claim he later withdrew), several critics pointed out that the disciplines he recognizes as pseudosciences do actually contain falsifiable claims. Furthermore, philosophers of science have often underlined that both psychoanalysis and astrology have indeed been falsified, therefore being falsifiable (Mahner 2013; Pigliucci 2013, Laudan 1989).

Moreover, as Kuhn, Feyerabend, and also Lakatos later showed, the history of science provides plenty of instances that contradict the notion that scientists discard their theories when observational data falsify them.

Scientists would rather regard those contradictions as exceptions, waiting for a better theory or explanation to come. In *Science and Pseudoscience*, Lakatos asked a more interesting question:

Newton's theory of gravitation, Einstein's relativity theory, quantum mechanics, Marxism, Freudianism, are all research programmes, each with a characteristic hard core stubbornly defended, each with its more flexible protective belt and each with its elaborate problem-solving machinery. Each of them, at any stage of its development, has unsolved problems and undigested anomalies. All theories, in this sense, are born refuted and die refuted. But are they equally good? (Lakatos 1974: 4–5)

Lakatos says they are not. Resuming an early perspective outlined by Popper (1962: 240), he claimed that a research program was progressive when theories had the power to make surprising, unexpected predictions, then confirmed by observation; otherwise, they were degenerating ones:

all the research programmes I admire have one characteristic in common. They all predict novel facts, facts which had been either undreamt of, or have indeed been contradicted by previous or rival programmes [...] In degenerating programmes, however, theories are fabricated only in order to accommodate known facts. Has, for instance, Marxism ever predicted a stunning novel fact successfully? Never! It has some famous unsuccessful predictions. (Lakatos 1974: 3, 4)

However, the problem posed against Lakatos' proposal was the implication that such demarcation would lead to considering a research program as degenerating simply because it fails to make progress or offer novel predictions. Additionally, one might find that various established sciences and theories could actually stand on both sides of such criteria. As Laudan argued:

Some scientific theories are well tested; some are not. Some branches of science are presently showing high rates of growth; others are not. Some scientific theories have made a host of successful predictions of surprising phenomena; some have made few if any such predictions. (Laudan 1983: 124)

And still, they have not been marked off for not having delivered confirmed, surprising predictions. The logico-mathematical, linguistic assessment of the issue

stands in contradiction with the history of science: should we consider the way science should work or rather the way it actually works? Popper was so focused on a logical interpretation of scientific theories as systems of statements that his model ended up identifying philosophical truth and scientific truth. But we cannot forget that science adopts logics also, not logics only. Thus, logics cannot be the arbiter in that trial, and specifically considering the challenges represented by paradoxes.

However, despite leaving Kant's problem unsolved, falsificationism does point to a crucial feature science is always expected to satisfy, and that scientists promote as its key characteristic. Namely, the receptiveness towards error, the ongoing acceptance to the revision of truths, models, and results, the possibility to abandon a set of mind and enter a new dimension in light of new evidence. As Philip Kitcher (1982: 33) once put it, the idea that "Fallibility is the hallmark of science."

However, if nothing in science is an unquestionable truth, such a criterion seems to be more embedded in ethics than in logic. With falsificationism, Popper actually tried to provide a logical tool to test a scientific value—namely, open-mindedness. Yet, that is not a purely logical property, for "logic is silent about whether one should reject the hypothesis in the face of a failed prediction P or search for a problematic auxiliary assumption(s)" (Cleland & Brindell 2013: 188). Against falsificationism, scientific progress has historically been achieved also despite contrary evidence. It was by continuing to use Newtonian mechanics, despite its failure in describing Uranus' orbit, that natural philosophers discovered Neptune (Kitcher 1982: 45). History of science suggests that no logical principle alone can justify the decision-making about whether or not a theory has to be abandoned or not, a statement to be considered correct or wrong, true or false, valuable or negligible.

Fair enough, while philosophers were trying to determine the logical limits of science, it took a scientist, particularly a physicist, to reintroduce human beings and their troubling ethics into the picture. In *The Function of Dogma in Scientific Research*, Thomas Kuhn (1961) strongly questioned scientists' open-mindedness,

showing that the reasons for a theory to be rejected or included into standard science were all but technical:

Though the scientific enterprise may be open-minded, whatever this application of that phrase may mean, the individual scientist is very often not. [...] From Galileo's reception of Kepler's research to Nägeli's reception of Mendel's, from Dalton's rejection of Gay Lussac's results to Kelvin's rejection of Maxwell's, unexpected novelties of fact and theory have characteristically been resisted and have often been rejected by many of the most creative members of the professional scientific community. (Kuhn 1961: 347–348)

Considering the historical evidence of such oppositions, we can infer that pseudoscience charges, together with a potential engine for scientific progress, have been precisely a mode of this resistance, as falsificationism in itself provided no solution to Kant's problem.

*Once anything like a cultural divide gets established,
all the social forces operate to make it not less rigid, but more so.*

(Snow 1959: 18)

Ever since Popper, the vastness of the philosophical debate around the distinction between science and pseudoscience has only been matched by its insolubility. Beyond falsificationism, several propositions have been advanced over time. Most of these, however, have focused more on territorial concerns and boundaries between disciplines than on the genuine solution of Kant's problem about knowledge. Those include Popper's second view and motivates the idea that we should consider it an entirely different problem. As recently pointed out by Maarten Boudry (2022; 2013) there may actually be two different demarcation projects in progress:

The demarcation project, [...] has traditionally been the banner of two distinct [...] intellectual projects, only one of which is pressing and worth pushing. The genuine demarcation problem [...] deals with distinguishing bona fide science from pseudoscience. The second [...] concerns the territorial boundaries separating science from such epistemic endeavors as philosophy, history, metaphysics, and even everyday reasoning. [...] I argue that the territorial problem has little epistemic import. (Boudry 2013: 79)

Among the elements suggesting the infertility of such a territorial demarcation between fields, Boudry (2013: 81) highlights that “there is often no way to

disentangle philosophical elements from scientific theories and arguments.” Indeed, no scientist would drop Occam’s razor principle, Leibniz’s integral rule or Mill’s method of agreement solely because they belong to philosophy. Philosophical ideas have always been intertwined with scientific activity in a structural manner, just like scientific discoveries influence philosophical reasoning. The principles of classical mechanics are based on Newton’s work, emblematically titled *Philosophiæ Naturalis Principia Mathematica*. On the same page, Konrad Lorenz once observed that, owing to his philosophical culture, Max Planck could treat causation not as a necessary a priori, but as a human-made hypothesis, to be rejected when it no longer conformed to experimentally deduced facts, and then replaced by the calculation of probabilities:

Max Planck was one of the first to attempt a breakthrough from physics, the most fundamental of the natural sciences, to epistemology, the most fundamental of philosophical disciplines. [...] Without his profound knowledge of Kant, Max Planck would hardly have succeeded in making this breakthrough, which is as revolutionary for the theory of knowledge as it is for physics. (Lorenz 1973: 17, 18)

It is true, though, that the separation between philosophical truth and scientific truth historically happened, fostering the growth of some specific sets of mind, premises for knowledge, and methodologies of research. The division also created meaningful difference between scientific questions and philosophical ones. Take these two sentences:

- *How does phytoremediation restore contaminated soil, water and air?*
- *Was the 9/11 New York attack one single event or two different ones?*

Intuitively we all feel the former is a scientific question and the latter a philosophical one, despite both having concrete, real, material impact, especially if you are the leaseholder asking an insurance company a refund which can be double or half according to the relative definition of the 9/11 “event”.⁵ Some sort of division in the theory of knowledge has been present since ancient philosophy, when Seneca was writing:

The philosopher investigates and gains knowledge of natural phenomena, while the geometer collects figures and measurements and does calculations based on them [...]. The rationale behind celestial phenomena, their efficacy and their nature: these are knowledge for the philosopher; [...] The philosopher will prove that the sun is large, the astronomer will proceed by empirical methods to find out just how large it is. (Letter 89: § 26-27)

But a radical divorce happened during the XVI century. According to Hannah Arendt, the moment of this split corresponds with the first use of the telescope, an act which separated how things appeared to the human eye from how they really were in the world. The telescope showed that the truth does not manifest, that it is something external to mankind, non-rational, obscure to our mind until revelation:

Since then, scientific and philosophic truth have parted company; scientific truth not only need not be eternal, it need not even be comprehensible or adequate to human reason. [...] After Descartes based his own philosophy upon the discoveries of Galileo, philosophy has seemed condemned to be always one step behind the

⁵ The question has actually been answered in court, see Hirschhorn & Wald, 2004.

scientists and their ever more amazing discoveries [...] Philosophers became either epistemologists, worrying about an over-all theory of science which the scientists did not need. (Arendt 1958: 290–294)

Warranted knowledge started to depend on the findings of an external instrument, more reliable and efficient than human cognitive apparatus. Human senses can intuitively inform us about the passing of time, but in no way do they allow us to know that the lower the gravitational potential, the slower the passing of time. Ever since Galileo, Arendt argues, modern philosophy mainly restricted its fields to the theory of knowledge, history, and psychology, affected by the ultimate reversal of contemplation and action. That may well have been the beginning of the territorial demarcation. Lorenz also agrees with Arendt, tracing the distinction between humanities and sciences:

Modern science came into existence with Galileo, without any real help on the part of philosophy [...] It paid no heed to the discoveries of the philosophers, who in turn studiously ignored the new natural scientists. Thus the seal was set on the division between ‘Art’ (meaning the humanities) and ‘Science.’ (Lorenz 1973: 17)

However, such a bold distinction widely disregards the interconnections between philosophy and the scientific method, making it hard, if not impossible, to ultimately separate the fields:

Scientific theories invariably rest upon certain philosophical underpinnings, and science without abstract reasoning and logical inference is just stamp-collecting. As Daniel Dennett succinctly put it, “there is no such thing as a philosophy-free

science; there is only science whose philosophical baggage is taken on board without examination.” (Boudry 2013: 81)

The clear distinction, for instance, provided by the 2001 STEM umbrella (a straightforward territorial model) seems to neglect precisely those interconnections, while emphasizing others to generate an idea of homogeneity among specific disciplines and extraneity among others. However, such territorial divisions have often been crossed in the past and are always subject, at least theoretically, to further transgresses. Indeed, Newton’s law of gravitation united astronomy and physics in one single science, “where the same equation will cover the movements of heavenly bodies in the sky and the motion of terrestrial bodies on earth” (Arendt 1958: 265); in a similar manner, the once separated researches of physics and chemistry are today “closely knit together not least by integrative subdisciplines such as physical chemistry, quantum chemistry, and surface science” (Hansson 2013: 63). Especially as new areas and mixed disciplines keep on flourishing, the boundaries remain fluid. As Georg Reisch once observed, though with much imagination:

If, for example, an astronomer convincingly demonstrated that zodiacal signs or observed conjunctions of planets were useful for pursuing substantive astronomical questions, the network unificationist could expand the boundary to include these parts of astrology that were previously considered unscientific. (Reisch 1998: 335)

To overcome territorialism, a partial set of such interconnections has also been proposed as a demarcation criterion, observing that scientific disciplines are integrated, sharing theoretical models and methods, while pseudoscientific explanations fail to produce tools that can be successfully adopted by scientific disciplines. Astronomists do not use statements and theories from astrology to

describe the world, while astronomy represents a crucial source for astrologists' work.

Still, if interconnections and compatibility of methodology and models frequently occur in disciplines, we cannot rely on such a demarcation proposal as a definitive criterion either. Not every model and theory is well integrated, smoothly compatible, and shared within different scientific domains. This is something particularly striking about physics, where partial theories are successfully used to describe the world without being adequately integrated. As Stephen Hawking (1988: 35) once noticed on general relativity and quantum mechanics: "Unfortunately, these two theories are known to be inconsistent with each other—they cannot be both correct," an evidence that alone may lead to ultimately dropping the curtain on this demarcation proposal. Here is, in fact, another key feature of science: these partial theories keep on being used as long as they serve their purpose, whether or not followed by an all-embracing coherent theoretical structure. As long as Newtonian mechanics gives us the tools to practically act on Earth, it will be used despite its limits.

It is indeed very interesting that, although most of scientists and philosophers of science do agree on specific cases of demarcation, this agreement has yet to find a common, sufficient, and necessary general criterion to rest upon. Equally fascinating is that nearly all singular ideal characteristic of scientific inquiry has been broken in the history of science to produce scientific knowledge (Feyerabend 1975). The horizon gets even wider if we consider viewpoints such as those of Anthony Derksen (1993) as well as of Kitcher (1993), according to whom pseudoscience is essentially what pseudoscientists do. Complementarily, Michael Shermer (2013: 207) claimed that "from a pragmatic perspective, science is what scientists do," with the idea of shifting the focus towards the researchers' activity. Within a scientific discipline, in fact, it is possible that a single scientist may veer onto a misguided path, or that any sort of bias may taint the outcome of a research. However, the question emerges again:

When exactly is an alternative theory a piece of pseudoscience and when is just a heterodox view? This distinction is important because heterodoxy should be welcomed as a stimulating critical debate and research, whereas pseudoscience is just a waste of time. (Mahner 2013: 31)

The case of Dr Wakefield's unfounded claims about the connection between autism and the MMR vaccine is known worldwide for being a scientific fraud of this kind (see White 2014). The lack of evidence for the conclusions of his paper, and its nefarious impact on public opinion, led to the withdrawal of both his article and his license by the British General Medical Council. Nevertheless, some argue that distinction tool is also not straightforward, as scientific fraud is not (yet) pseudoscience (Mahner 2013: 31), nor is pseudoscience simply non-science.

This approach leaves us with the unresolved task of demarcating when a researcher has to be considered an unappreciated visionary, a bad scientist, or a pseudoscientist. While the Wakefield case is a clear case of fraud, more subtle stories complicate the appraisal. Consider the case of Luc Montagnier, accused by some colleagues of promoting dangerous pseudoscience. Does it not sound uncanny that a virologist, trained in science and awarded the Nobel prize for the discovery of HIV, can become a pseudoscientist simply for holding an unpopular theory? Under what conditions does a researcher deserve that label? And who is susceptible to being described as a pseudoscientist? On this matter, Shermer brought about a relevant quote by Michael Gordin:

Historian of science Michael D. Gordin observes in his book *The Pseudoscience Wars*: “No one in history of the world has ever self-identified as a pseudoscientist. There is no person who wakes up in the morning and thinks to himself, “I’ll just head into my pseudolaboratory and perform some pseudoexperiments to try to

confirm my pseudotheories with pseudofacts”. (Shermer 2013: 221)

Is a scientist’s sincere belief in a borderline research program enough for her/him to deserve the label of pseudoscientist? Once more, the idea that we can solve the problem by focusing on the activity of a single researcher, while free from territorial constraints, does not represent a definitive solution to the demarcation problem.

Other demarcation propositions have been put forth, trying to address epistemic qualities, methods, and communities combined in nuanced multicriteria approaches. However, no conclusive set of technical, value-free elements has thus far been able to satisfy the necessary and sufficient requirements of epistemic invariants. Even the basic requirement of tests and experiments as a key feature of science has been questioned, since it is an aspect of scientific enquiry but did not historically characterize its entire process of discovery. Lorenz (1973: 19) once observed that “Kepler and Newton discovered the laws that govern the movements of the heavenly bodies solely on the basis of observation and description, without making a single experiment.” Would that mean that those laws were metaphysical (pseudoscientific) until a test was performed? How can one set such a requirement as a demarcation criterion, since they do not describe the history of science?

If we had anything like a clearly defined set of epistemic criteria, there would be no uncertainty around specific cases and theories. Also, there would be no resistance against the advance of new models. The historical evidence indicating that science itself is changing over time and does incorporate values, makes it unlikely to succeed in identifying so-called pseudosciences on the ontological level. The pursuit of demarcation thus seems more political than epistemological, especially if we accept that scientific paradigms are incommensurable with each other (Kuhn

1962: 103).

Popper's first formulation of the demarcation problem did not involve pseudoscience. By changing the terms that way, the statements of mathematics, logic, and metaphysics suddenly become pseudoscientific, despite the central role they may play within scientific theories. Moreover, the greatest topic is still left unaddressed—what concept of pseudoscience is such a change based on? In order to account for that, it may prove fruitful to analyze some aspects of the debate.

*Wherever the relevance of speech is at stake,
matters become political by definition,
for speech is what makes man a political being.*

(Arendt 1958: 4)

Sir Karl Popper did not pick the word pseudoscience out of a hat. Just like science, the term pseudoscience is a modern product, running side by side with the progressive definition of every novel scientific endeavour.

Some researchers have traced an early reference to the word ‘pseudoscience’ back to 1824, when Sir William Hamilton used it to refer to phrenology (Thurs & Numbers 2013). Other reports indicate older uses of the Latin term pseudoscientia in the first half of the XVII century (Guldentops 2020) and according to the OED, a 1796 entry was used by James Pettit Andrew to describe alchemy. Indeed, the first uses of the category were intended to dismiss entire research programmes or disciplines, in compliance with the territorial purpose. By reintroducing the word ‘pseudoscience,’ Popper replaced the Humean and Kantian problem of ‘reasonable belief’ with the problem of the reasons for accepting or rejecting scientific theories and statements. In this sense, one might question whether we should call the demarcation problem Kant’s problem or rather Popper’s problem.

Some of the reasons why the second version of Popper’s demarcation problem remains unsolvable seem closely connected with the concept of pseudoscience itself. This term, in fact, though simple enough, does not stand on its own legs, leading only a relative existence. Pseudoscience relies only on its relation to an external other, to something else—namely, the concept of science. As the defining standards of science change, so does pseudoscience:

Pseudoscience is necessarily defined by its relation to science and typically involves subjects that are either on the margins or borderlands of science and are not yet proven, or have been disproven, or make that sound scientific but in fact have no relationship to science. (Shermer 2013: 203)

The problem with Popper's late formulation is a double-sided one: on the one hand, we are invited to identify a challenging logical object, a false-science, or false-knowledge; suggesting that pseudoscience is somehow telling the false, it is sort of lying, pretending to adopt the scientific method or belong to a scientific field. The etymological argument is in itself a relevant one, since 'pseudo' means false, and 'science' means knowledge. This makes pseudoscience an accusation, a charge more than a thing or a set of disciplines. A pseudoscience charge is an allegation of error, of deviance from the norm represented by normal science at a certain stage. Therefore, it is a temporary, time-relative, and value-relative judgment. On the other hand, the term 'science' itself, which should serve as the basis to define its nemesis, is constantly changing together with its standards, paradigms, disciplines, and theories, making of such dynamism no less a value and a reason of being.

Contrary to the history of scientific truth, it has been observed that a clear distinction of science and non-science would require the existence of epistemic invariants, meaning a set of stable and absolute elements serving as the basis for such differentiation, while plenty of evidence proves that no such tools have been found nor produced yet (Laudan 1983: 124). The history of science reveals that what was true yesterday might be false today, and what is false today might become true tomorrow, as our understanding of reality is one with the models we adopt to define it. Given that this peculiar dynamism makes it unrealistic to establish such boundaries between science and non-science once and for all, pseudoscience has been described as an extra category that epistemology may not need. Even within the realm of

science, individual scientists have different views on whether or not a theory should be considered scientific, correct, or worthy. Let alone their funders, who surely have specific interests in promoting one vision over another. Consequently, since epistemic heterogeneity makes sciences themselves elusive as ever-changing and subject to interpretation, why should we not simply follow Larry Laudan when he acknowledges that it is not possible to successfully define pseudosciences on the epistemic level?

Without conditions which are both necessary and sufficient, we are never in a position to say “this is scientific: but that is unscientific.” A demarcation criterion which fails to provide both sorts of conditions simply will not perform the tasks expected of it. (Laudan 1983: 119)

There is a reason for this failure. First, we have to acknowledge that pseudoscience is better defined not as a thing, or a bundle of disciplines, a tradition, or a fuzzy methodology, but pragmatically as a discrediting judgement, an accusation, a normative prescription, or just a *petitio principii*. Perhaps, “a demarcation criterion will typically assert the epistemic superiority of science over non-science” (Laudan 1983: 119). When we thus approach pseudoscience charges on the discursive level, certain regularities emerge. Those regularities are political in nature.

The many ways and situations in which pseudoscience charges have been used are diverse enough to shed light on both its arbitrariness and its function as an exclusion device. As noted by Resnik, “a given discipline can transform from pseudoscience to science over time” (2000: 254). In the 1950s, economics has been described as a pseudoscience (Thurs & Numbers 2013: 133) and is now proudly included in the STEM disciplines; on the opposite side, the barbarian practice of lobotomy has been celebrated for decades due to its “therapeutic value” and granted its discoverers a Nobel Prize. Back in 1925, a high school teacher John Scopes was

arrested and prosecuted in Dayton, Tennessee, for teaching Darwinism. Funnily enough, the accusation of teaching a pseudoscience came from Christian creationists who believed they were somehow entitled to discern science from pseudoscience based on religious grounds. In 1949, the Soviet Communist Party declared Mendelian genetics a pseudoscience and had its supporters arrested, including Nicolai Vavilov, who would later die in a concentration camp. Both theories form the foundation of today's scientific view of the world. Similar cases are frequent in the history of science. When adopted by scientists, the rationale behind such claims may well stem from the need to preserve a boundary, which is created and maintained precisely within the act of demarcation, in an attempt to prevent the abuse of scientific authority:

Maintaining scientific boundaries has required struggle. Rather than relying on a timeless set of essential attributes, its precise meanings have been able to vary with the identity of the enemy, the interests of those who have invoked it, and the stakes involved, whether material, social, or intellectual. The essence of pseudoscience, in short, is how it has been used. (Thurs & Numbers 2013: 122)

Above, we inquired as to why Popper had decided to change the terms of his research. Probably, discredit is a reason. While 'empirical sciences' and 'logic and mathematics' represented the existing, established, and respected fields of knowledge, the new distinction between 'science' and 'pseudoscience' was not an impartial, unbiased one, but proposed a discriminating, value-charged judgement. A good argument for that was presented by Laudan:

demarcation criteria are typically used as machines de guerre in a polemical battle between rival camps. Indeed, many of those most closely associated with the demarcation issue have evidently had hidden (and sometimes not so hidden)

agendas of various sorts. It is well known, for instance, that Aristotle was concerned to embarrass the practitioners of Hippocratic medicine; and it is notorious that the logical positivists wanted to repudiate metaphysics and that Popper was out to ‘get’ Marx and Freud. In every case, they used a demarcation criterion of their own devising as the discrediting device. (Laudan 1983: 119)

The reason for this shift in categories was probably Popper’s personal concern around the enthusiasm among many of his colleagues towards the theories of Marx, Freud, and Adler. Pseudoscience represents exactly a mode of this machine de guerre, devised for specific purposes by specific authors over time:

Pseudoscience appeared at precisely the same time during the early part of the 1800s that science was assuming its modern meaning in English-speaking cultures to designate knowledge of the natural world. The more the category of science eclipsed and usurped significant parts of those activities formerly called natural philosophy and natural history, the more rhetorical punch “pseudoscience” packed as a weapon against one’s enemies. (Thurs & Numbers 2013: 124)

To take the best out of the science versus pseudoscience debate, it would probably be more fruitful to proceed beyond ontology. Rather than what is pseudoscience, we should ask who has been using this category overtime, in what context, and for what purposes. If we focus on the use of the pseudoscience charges by scientists, we could then deduce that within the stunning epistemic heterogeneity adopted by scientific inquiry, the function of pseudoscience charges is precisely the one of defending and creating the idea of stable boundaries. As observed by Thurs and Numbers (2013: 124), “[p]seudoscience did not simply run afoul of scientific orthodoxy—it helped create such orthodoxy”.

Given that all demarcation attempts have failed to deliver a final set of criteria to not only distinguish science from pseudoscience, but also science from non-science, and considering, as exposed by Laudan, there is no possibility to succeed in the quest due to the absence of any possible epistemic invariants, pseudoscience charges continue to appear both in the public and in the scientific debate. In order to understand the meaning of this category we need to consider pseudoscience under a different light, namely under the discursive, political, and pragmatic take describing it as a charge, an accusation, a discrediting practice whose function is strictly connected with one of the most relevant values of scientific endeavors—epistemic heterogeneity. Since science has no boundaries, pseudoscience charges are used to create them, according to the issuer's goals.

CONCLUSIONS

*The philosophy of each science originates independently of general philosophy,
from the data of its own branch of knowledge.*

(Schopenhauer 2019: 146)

As this text is written, UK's first three-parent baby was born following an IVF procedure (James 2023); a ULX pulsar, breaking laws of physics by radiating hundreds of times above Eddington limits has been observed (Bachetti et al. 2022); OpenAI's GPT-4 model is writing online contents (Chow & Perrigo 2023); and China's artificial Sun has just broken its own 2017 record for the longest sustained nuclear fusion on Earth (Chen 2023).

This special game, with new rules and fact-finding practices, that we call science confirms its striking power over time. It is obvious that such power comes with a proportional prestige associated with scientific endeavors, and that this goes even beyond the ability to provide us with the most warranted knowledge about the world. It is also obvious that more and more people will try to exploit some of that prestige without doing all the necessary work, by claiming scientific authority in order to support the weirdest claims, policies, and practices. That is when the political discourse of pseudoscience steps in as a tool to protect science from abusive claims:

Historically, then, demarcation has typically been a conservative exercise in exclusion, an attempt to preserve the purity of modern science as the primary engine of social progress (Nickles 2013: 105).

Epistemologically, that may well be the function of the category of pseudoscience. The progressive extension of the scientific method to the analysis of the world led to an incredible advance in knowledge and to unbelievable progress in technology, reshaping human vision of the world, though limiting its interests to the range of values of an industrial, consumerist, capitalist, and military society. The

activities merged under the name of science have rightfully earned it a status and an authority which are inconceivable in any other branch of knowledge. However, the will to protect this system of knowledge production stands side by side with the fact that science is still a human activity, with several people holding various interpretations of its data, contents, methods, facts. Furthermore, science is an activity reshaping the premises of our knowledge. If logic itself is silent about what premises one should choose, science precisely works at this level.

What is pseudoscience then? In short, we can consider it a side effect of science's absolute knowledge ambitions, dynamic paradigms, and epistemic heterogeneity. Some theories which have been labeled pseudoscience have later been included into the realm of normal sciences; many programs, born and raised into science, have later fallen out of favor. The demarcation project in the form of an ontological differentiation does not account for the actual use of the category of pseudoscience in our society. While long-standing attempts to define specific fields or a set of criteria could not yet deliver a conclusive answer to the topic, the pragmatic interpretation of pseudoscience as a machine de guerre does account for the various contexts and situations in which that category has been used.

Pseudoscience charges are a political tool to help an epistemic community define and maintain the uncertain, unclear, shifting, everchanging borders of scientific domain. It is a word running through lips, tribunals, schools, literature, laboratories, philosophers, scientists, Christians, atheists—all with the common aim of defending a specific idea of what is true and what is false. Pseudoscience is a Kafkaesque gatekeeper at the doors of the law. This seems to have been (and continues to be) the function of pseudoscience. The reason for that may be connected to the responsibilities related with the ability to provide exact knowledge, as suggested by Pigliucci:

In the form of creationism and its challenges to the study of evolution, pseudoscience has done great damage to public education in the United States and elsewhere; it has swindled people of billions of dollars in the form of “alternative” medicine like homeopathy; it has caused a lot of emotional distress, for example, to people who are told by mystics and assorted charlatans that they can talk with their dead loved ones. Conspiracy theories about AIDS, which are widespread in many African countries

and even in the United States, have literally killed countless human beings throughout the world. (Pigliucci 2013: 3)

We believe we all share such concerns, precisely because we want to trust science and scientists. But we can also consider that those activities, doctrines, and movements are equally dangerous under the name of “unjustified beliefs,” “wrong ideas,” and “disproven theories.” Their qualification as pseudoscience makes no real difference in regard to their potential for harm. The core of the claim is still an accusation of promoting a wrong idea about the world. We have to be careful with the spread of flat-earthers not because that is pseudoscience, but because it represents the spread of a form of ignorance with the right to vote.

At the same time, Fentanyl and pharmaceutical opioids, the worldwide widespread production of single-use plastics, the weapons industry as well as all refinery pollutants are inflicting significant damage both on the planet and human kind, despite their unquestionable affiliation to the realm of exact sciences. In fact, we have to admit they are making much more damage than astrology has ever done. If the purpose were to identify where the perils are, we would probably have to acknowledge that the threats are more closely connected with the realm of normal science and its policies than to that of pseudosciences. For such purposes, a pragmatic distinction between science and non-science has already been advanced:

We distinguish between science and non-science in various practical settings. The reason we need to make these distinctions is that they often have important consequences for health, safety, education, policy and justice. [...] Rudner argued that standards of scientific proof should depend on the consequences of making a mistake: the worse the consequences, the higher the standards should be. (Resnik 2000: 261-2)

Theoretically, science has no boundaries. Scientific heterogeneity is so wide that not even scientists have control over its boundaries and limits. Nevertheless, some individuals behave as though they can. These are the proponents who use the term pseudoscience to protect a boundary that may have been crossed, or not yet reached.

Instead of presuming that there is such a thing as pseudoscience, a better understanding about this category might be obtained by examining authors who have paid attention to the historical contexts of the way that word has been used. Such reading may well account for its meaning. Employing a method that is less innovative than reasonable, we would second Pierre Menard, according to whom history is the mother of truth, pragmatically drawing the meaning of this word from its history (see Borges 1999a: 94).

Differently from both Karl Popper and Thomas Szasz, we approach the question of demarcation from a pragmatic point of view, considering it as a political and normative tool rather than a descriptive one. If we argue that within the epistemological tradition the reason for the existence of the category of pseudoscience coincides with the impossibility of defining the limits of scientific knowledge and its methods, then the statement of Thomas Szasz about psychiatry being a pseudoscience has rather the function to defend scientific materialism. Therefore, despite the questionable standards of scientificity adopted by psychiatric taxonomy, the definition of hysteria as a pseudoscientific category is refused, as no epistemic invariants allow for the demarcation problem to be solved. In chapter four we will further address the status of metaphors within scientific knowledge production, claiming that the deployment of metaphors can not represent a proper demarcation criteria.

To conclude with some etymological concerns, philosophy is defined as the love for knowledge, or wisdom (Greek φιλο-σοφία), and science is knowledge itself (Latin scientia) further defined as the ability to separate things, *sek-* being a Proto-Indo-European root meaning “to cut up” (See de Vaan 2008).

Are we certain that trying to impose boundaries on knowledge, to restrict its procedures (and thus its future achievements) is the best form to express that love?

Enforcing any such criterion would likely harm future science more than help it. To adopt a criterion that legislates for all future science falls into the trap of thinking that we are today in the privileged position of having finally escaped from history. (Nickles 2013: 114)

CHAPTER 3 ⁶

SOCIAL ONTOLOGY, TRANSIENT MENTAL ILLNESS

AND JUSTIFIED FALSE BELIEF

RESUME

Along the XIX and XX century, hysteria has been the cornerstone for the birth of neurology, psychoanalysis and dynamic psychology. As seen above, after the nosological category was erased, a debate was raised questioning taxonomic criteria in psychiatry. Hysteria was not alone: multiple personality, homosexuality and fugue, among others, had been diagnosed for decades and were later eliminated from scientific taxonomy. A flourishing literature proposed several interpretations to account for those removals, from pseudoscience charges to scientific bias claims, from the social construction of scientific facts to analytic dismemberment. In chapter two, we argued that the reality of hysteria, and of other taxonomic categories of DSM, should not be framed according to the science/pseudoscience distinction. In chapter three, we look closer to another analytical perspective around its reality, namely the model of social constructionism applied to psychiatric diagnostic constructs.

The category of hysteria is here endorsed as a result of the social construction of a scientific fact, on the border between natural kinds and interactive kinds of taxonomic

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categories. We intend to try take Ian Hacking's contribution on “ecological niches” towards contextualist epistemology around the validity of “Justified True Beliefs” (or, in this case, Unjustified False Beliefs), further attempting to extend the arguments to some reflections of Edmund Gettier around the definition of knowledge and its warranties. The idea that justificationism may be capable of guaranteeing the reliability of the attributions of knowledge elaborated by scientific entities is rejected on a historical base, and the act of knowing is considered in the terms of an understanding, whose logical and psychological status significantly overlaps with the act of believing, regardless of skepticism. Following the work of the later Kuhn on taxonomic revolutions, we will separate the ideas of “scientific revolution” and “taxonomic reformulation”, to claim that the disappearance of the category of hysteria does not correspond to a resolution of the conflicts inherent to the psychiatric paradigm as it is represented in the DSM (and increasingly in the ICD). Unlike Hacking, we do not consider DSM rewritings as scientific revolutions. We argue that the way psychiatric manuals define their kinds does not guarantee around their reliability yet, and that therefore the new nomenclature is not suitable for better defining dysfunctional behaviours, just as the label of “Transient Mental Illness” does not account for the reality of those diagnostic constructs beyond mere social ontology.

INTRODUCTION

As seen in chapter one, hysteria has been a medical puzzle for centuries. The set of behaviours collected under the label “hysteria” have allegedly been describing a neurological disease (Charcot), a brain disease (Briquet), a spirit possession (Middle Ages), a form of suggestion/persuasion (Babinski), a female disturbance (Jorden), a mental alienation (Pinel), a psychological problem of personal synthesis (Janet), a sexual neurosis (Freud), an outcome of contradicting stimuli (Pavlov), a non-verbal form of communication (Breton), a piece of art (Didi-Huberman), an act of resistance (Ong), and more.

As mentioned in our premises, the fact of a scientific community eliminating an entity, namely a disease, from its standard nomenclature rises questions which seem to stand in contradiction with classic scientific realism, a philosophical paradigm assuming the existence of entities independently from a knowing subject. While the reclassification of kinds is not an exception in scientific inquiry, it is usually motivated by other parallel changes: on the ontological level, on the criteria at the base of classification itself, by a change of perspective, a broad shift in theory or a novel discovery. Is that the case of DSM revisions? Especially intriguing, in this respect, is the reintroduction in the DSM listing of some once eliminated kinds, as happened for instance in the case of multiple personality, suggesting that scientific entities in psychiatry may get in and out of reality somewhat too easily.

Under what conditions does an entity stop to exist? Under what conditions can a dismissed scientific kind be reintroduced in the world after having been eliminated? What kind of process brings these entities into existence in the first place?

The issue is further related with the definition of disease and its models of reference (see Faucher & Forest 2021). In nature, diseases can propagate in a certain timeframe, they can cause outbreaks and then, for several reasons, stop circulating or be successfully eradicated. It is known that illnesses can disappear and come back in different places and times, according to environmental, healthcare, technological, hygienic and even political and military factors. However, when a disease stops occurring in a population or area, it is not accordingly erased from medical dictionaries. The scientific kind continues to exist and to be valid despite the fact that the disease is not active anymore. If this is true for medicine, psychiatry has been working somewhat differently in the identification of its objects. Since its first edition in 1952, DSM rewritings reached a very critical number, reformulating its kinds quite fast, drastically and frequently. Every time the DSM creates a nosological category, or several of them, a reader may be led to ask: do those kinds correspond to the world as it is, this time? Have such diseases ever existed out there, before their medical classification? Have those kinds been discovered or have they just been invented? When, on the contrary, psychiatrists erase an entry from their standard catalogues, one may ask how had doctors been warranted, until then, to believe they were scientifically observing an entity that, according to the new standard, did not exist. How does a community depathologize a behaviour? How does a community re-pathologize a behaviour, or a set of thoughts? Possibly, a scientific theory of disease (germ theory, latent model, etc.) may have been replaced by a better one. If so, what changes happened at the ontological level in order to allow for the elimination or relocation of those elements? And more relevantly for contemporary kinds: how are scientists warranted today to believe they are observing the current entities they diagnose? How can they scientifically legitimize the distinction between conversion from somatization, when those kinds, as many others, frequently overlap? (On this, see Allsopp 2019; Hacking 1994: 278; Kuhn 1994: 319). What kind of knowledge do those kinds and entities represent in science?

This chapter aims to approach some of those questions by putting them in relation to the definition of knowledge in classical and social epistemology. To do that, we will be following some of the works of philosopher of science Ian Hacking who, while remarking that “Yes, anything might happen in psychiatry” (1998: 93), has been intensively studying the vanishing category of hysteria in the form of *hysterical fugue*. Faced with the disappearance of a disturbance previously widely diagnosed, he searched for an encompassing answer to the extremely interesting question: *What made the diagnosis possible?*

He thereby argued that the reality of such mental illness was the result of the existence of “an ecological niche with four principal vectors to be named medical taxonomy, cultural polarity, observability, and release” (1998: 81). We will try to translate this proposal into contextualist epistemology, to consider such coordinates as sufficient and necessary conditions for a Justified False Belief to be held by scientists. While asking whether or not contemporary conditions guarantee doctors’ current beliefs, we will further wonder: does the very social ontology of mental illness constitute an issue for knowledge attributions within medical empirical method?

By reviewing the definition of “Transient Mental Illness”, we will also question medical taxonomy and observability as proper “reality vectors” for the social ontology of mental illness. We will further claim that the selective adoption of social constructionism towards past categories and traditional scientific realism for current kinds represents a philosophical *impasse* in the understanding of behavioural dysfunctions, providing a strong argument in favor of the long-held idea that a paradigm shift is still much needed in psychiatry but has not happened yet. According to some (see Wade & Halligan 2017) the reasons why such paradigm shift has not yet appeared is not to be found within medicine itself, but rather in its surroundings: the social, economical, political forces driving scientific research and practice. We will

see how the social ontology of mental illness plays a pivotal role in this context.

We will move our argument from Hacking's 1998 work entitled *Mad Travelers. Reflections On the Reality of Transient Mental Illnesses*. There, he approached some notable cases of category rewritings of the DSM. He addressed such instances as follows:

By a "transient mental illness" I mean an illness that appears at a time, in a place, and later fades away. It may spread from place to place and reappear from time to time. It may be selective for social class or gender, preferring poor women or rich men. I do not mean that it comes and goes in this or that patient, but that this type of madness exists only at certain times and places. The most famous candidate for a transient mental illness is hysteria, or at any rate its florid French manifestations toward the end of the nineteenth century. (1998: 1)

Dealing more precisely with the case of *hysterical fugue*, he further defined his position about the reality of such a disease in a chapter named *Five Questions, Five Answers*, whose summary will be the lead of our discussion and goes as follows:

1. What made fugue possible, as a medical diagnosis?

An ecological niche, with four principal vectors to be named medical taxonomy, cultural polarity, observability, and release.

2. What did those old fugueurs suffer from?

By 1990s criteria, some suffered from head injuries, some from temporal lobe epilepsy, and some from dissociative fugue.

3. *Were doctors of the day warranted in holding hysterical fugue to be a real mental illness?*

Yes.

4. *Was hysterical fugue a real mental illness?*

No.

5. *Are analogous conclusions to be drawn about transient mental illnesses today?*

Yes.

(1998: 81)

Finally, treating elsewhere the specific case of the elimination of *hysteria* as a nosological kind, he further argued that:

This is a rare unequivocal example of a scientific revolution, in the sense of Thomas Kuhn's last work. One taxonomy replaces another, to the point that we simply do not know what hysteria was any more. (1998: 72)

We will here elaborate on those claims, analyzing the validity context of such scientific claims and questioning some of Hacking's position over the issue. In particular, we argue against the idea that while old categories are not to be considered as real, new one would be so (points 2 and 4). We will rather show that several ancient doctors, living in the same epistemic community, at the same level of technological development, with the same diagnostic means, and often belonging to the same linguistic community and even generation, were not warranted by the context itself in holding hysteria to be real (point 3). With a parallelism with the Gettier cases, we endorse the idea that justification or warranties around beliefs do not

guarantee, nor represent, knowledge unless a redefinition of knowledge itself is taken in consideration. In other words, deciding whether or not *doctors knew that P*, largely depends on what one means by “knowing”.

Hacking's idea of an *ecological niche* provides an interesting tool to account for the role of a justification structure in supporting a belief within a certain community in a certain time. It also represents a brilliant case study in favour of Edmund Gettier's critique of justificationism applied to scientific knowledge, and brings us to reconsider the reality of some scientific kinds, or taxonomies that, although protected by the affiliation to the scientific realm, may have very little degree of epistemological reliability. As observed by James Ladyman, "the fact that a word is used by a group of people to label a kind does not imply that a genuine kind exists" (2013: 50). That seems to be precisely the problem with psychiatric diagnostic constructs. However, as illustrated by Hacking, the social use of a word can somehow make it real nevertheless. Reality becomes, under this gaze, something more than the sort of "thing" traditional materialism provided: it becomes a more complex system, made of people's facts, beliefs and actions in the world. The idea is all but new and has been famously phrased in the proposition 1.1 of Wittgenstein's *Tractatus*, where he states that "the world is the totality of facts, not of things" (1922: 31). Among those facts, we find scientific facts as well, including the relation between DSM editorial board rewritings and real world diagnoses on people. That impact is real indeed, as diagnosis provokes social consequences and changes relations. In the pages of *Working in a New World*, Hacking observed:

A disorder with virtually no instances in the 1960s has passed from "rare" in 1980 to "surprisingly common" in 1990. For better or worse, such are the effects of forcing a taxonomy onto a body of practitioners. Patients with the disorder never appear in the clinics of European psychiatrists, who are not under the sway of *DSM* and whose patients see little of it in the popular press, on television, or in the movies. (1994: 303)

The label of “Transient Mental Illness” has, on the one hand, the great virtue of identifying a historical and sociological pattern. The training of psychiatrists under the volatile nosologies of the DSM and ICD produces patients and diagnoses in a specific timeframe. It produces, moreover, several social kinds according to a controversial catalogue of scientific kinds. We had hysterics, schizophrenics and bipolars long before anyone could be sure that hysteria, schizophrenia and bipolarism actually exist. However, those social kinds, that Hacking calls “interactive kinds” (1999; 1996), are real in a sense that goes far beyond scientific materialism, providing a crystal clear illustration of how scientific facts and social constructionism can vividly coincide in concrete circumstances.

The core of Ian Hacking’s reflection on transient mental illnesses is not the constructivism controversy, but rather the concept of “interactive kinds” [...]. Our representation of a person has an effect on that person, as she might act in return on this representation or in relation with it, differently from inanimate objects. This is what Ian Hacking calls “looping effect”. (Delille & Kirsch 2016: 89)

DSM nosology and the socialization of intern doctors within such cognitive system of kinds trains them to read the social world according to those kinds, it creates a form of reality which was not necessarily there before, that will modify agents and will be modified by them. Furthermore, separate scientific disciplines, various epistemic communities and the sciences in different countries may differ in their category production system and criteria, as it happens with the DSM and ICD standards, in open contradiction with scientific universalism. As a result, the kinds produced within diverse endeavours are themselves different in their ontological status and may produce different social realities. In fact, although they all go under

the “scientific” label, kinds produced in physics or biology may have very little in common with those produced in psychiatry. Hacking was a particularly bitter critic of the low scientific reliability behind psychiatric kinds, as he wrote that: “Physics and psychiatry may both have structures of taxonomic kinds, but do not the kinds of physics arise from the science and not from committee vote and lobbying?” (1994: 303). As he further observed, adopting here a realist argument, the introduction of the kind “pulsar” in astrophysics did not change the world as it was. The number of pulsars out there, independent from designation, was the same before and after the discovery of Jocelyn Bell Burnell in 1967. They existed before and after the denomination of the new kind. Similarly, it would take some great discovery, advance in theory, well documented evidence in order to cancel or revise the kind “pulsar” or the existence of “lithium”. On the contrary, nosological categories of psychiatry do not seem to require any strong evidence to be created, eliminated, reintroduced or modified, and they do change social reality as it is.

The number of pulsars out there was the same, even if the world in which the astrophysicists worked was new. In the case of multiple personality disorder in the US, the world itself has changed. There are a lot more people out there evincing multiple personalities, just because this has become a possible and reinforced way to behave. (Hacking 1994: 304)

The label of “Transient Mental Illness” also has the virtue to underline the surprising frequency of DSM nomenclature revisions, reflecting thereby the peculiar position of psychiatry within the realm of the sciences:

The successive editions of the *Diagnostic and Statistical Manual* of the American Psychiatry Association are a case in point. The second edition was published in

1967, the third edition in 1980, and the third edition, revised, in 1987. These are authoritative and authoritarian attempts to produce a standardized psychiatric lexicon, in Kuhn's sense. All mental maladies are clamped to taxonomic trees. The trees were almost completely rebuilt between the second and third editions, and many of the disorders were placed in new relations. Thus "multiple personality disorder" had completely disappeared from the second edition but has a slot in the third, and was enlarged in the revised third edition, much to the delight of those psychiatrists sardonically called "multipliers" by their opponents, who in turn were dismayed. (Hacking 1994: 303)

When it comes to consider the peculiar status of psychiatric constructs within the realm of scientific kinds, we therefore follow Hacking's lead. Yet, we believe the case of DSM rewritings also deserves some of a different approach, or at least a form of criticism more close to its own tools, according to its specific research programme. Seen from the perspective of scientific realism, we think the label "Transient Mental Illness" may also represent a philosophical *impasse*. We'll explain why in a moment. First, it seems worth to remember that, when Hacking was writing, the very expression "mental illness" had long been discredited by psychiatrists (see Szasz 1974) with criticisms that gradually led to the adoption of lighter terms, like "disorder" and "dysfunction" to address its objects, an operation which may be considered as a mere "cosmetic" change with no conceptual substance. As already seen in chapter 2, thus wrote psychiatrist Thomas Szasz on this matter:

Psychiatry is conventionally defined as a medical speciality concerned with the diagnosis and treatment of mental diseases. I submit that this definition [...] places psychiatry in the company of alchemy and astrology and commits it to the category of pseudoscience. The reason for this is that there is no such thing as "mental illness." (Szasz 1974: 455)

And about the definition of disease, let us recall his positions, already mentioned above in chapters one and two. A radical materialist, Thomas Szasz considered a disease as a:

Pathological alteration of cells, tissues, and organs. If we accept this scientific definition of disease, then it follows that mental illness is a metaphor, and that asserting that view is stating an analytic truth, not subject to empirical falsification. [...] Except for a few objectively identifiable brain diseases, such as Alzheimer's disease, there are neither biological or chemical tests nor biopsy or necropsy findings for verifying or falsifying DSM diagnoses (Szasz 2011: 2, 179)

For such reasons, diagnostic constructs of psychiatry would deserve to be considered rather as entities based on a social ontology. But if we then overlook for a moment the “mental illness” part of this entry, which is problematic enough *per se*, we may consider the “transient” character of such label. By the adjective “transient”, as defined by the author, we get to know that a set of categories has existed within a timeframe and has later been erased. However, any historian of science could claim that all scientific theories are transient, and they are so by definition. Which brings us to ask: why should one ascribe this feature (temporariness) especially to some set of dismissed categories of science, in this case psychiatry? Revisionism happened several times in the history of the sciences and, in the end, it is how science works (see Chalmers 1976).

Even quantum physics, in the very words of its creators, provided a temporary set of theoretical constructs that was intended to be overtaken in the future. As recently stated by Roger Penrose:

You have to look carefully at Dirac's writings [...] You find the right place and you see Dirac says quantum mechanics is a provisional theory. We need something that explains the collapse of the wave function. We need to go beyond the theory we have now. I happen to be one of the kinds of people [...] who believe quantum mechanics needs to be modified. (Penrose 2020: 51:50)

Nevertheless, in such cases of theoretical shift, both scientific and philosophical vocabulary would rather describe past ideas as dismissed categories, disproven theories, outdated hypothesis and not as "temporary" realities. The fact of having been temporarily valid does not impact the dismissal. Since scientific observations and findings are inextricably produced within a theory or model, it follows that a change in the latter corresponds to a change in the formers (see Feyerabend 1958). Typically, as the change happens, a new theory incorporates or replaces the old one, together with its taxonomy and laws (Lakatos 1978; Kuhn 1962). Hereby, this may be the limit of "Transient Mental Illness" as an analytic concept. One can see people may enact according to the diagnostic constructs available, endorsing temporariness, but at the source of the creation of such kinds, in the hands of psychiatrists, it is not a descriptive kind according to realism. If hysteria (and hysterical fugue, and multiple personality...) was not a real mental illness, as stated in point 4 above, why elaborate the "transient mental illness" label to describe it? Once the heliocentric model of the solar system had gained scientific consensus, no one felt the need to describe the former reality as a "Transient Geocentric Astronomy". Likewise, one does not refer to any "Transient Four-Elements Chemistry" or anything alike. Consequently, Hacking's idea to describe a disproven theory, or any current one, as "transient" represents little more than a tautology, both in scientific and philosophical terms.

It does something more, too. By proposing the existence of an ecological niche as support for that temporary model, by dismissing the reality of old categories and by

accepting the truth of the new ones (points 2 and 4), it somehow suggests that we are now looking at the world from a safe and privileged place, out of history. Arguably, however, some ecological niche, some epistemic context, is always at work at any stage of the production of human knowledge about the world. Right now, we as well find ourselves within an ecological niche enabling the implementation of the current models, theories and transient knowledge of reality (we use the word *knowledge* intentionally here). That knowledge may be proven wrong in the future, thus revealing that we are currently holding as many “justified”, “warranted” false beliefs. Yet, it still represents knowledge today, according to current models and theories, within this ecological niche. This seems to endorse the incommensurability principle. In fact, such ecological niche is structuring what we now call reality, and until a new paradigm appears, we will simply be not aware of that, we will be one with it. So how can the characterization of an ecological niche constitute a warranty for knowledge? Here comes the *impasse*: if we call those categories “transient” instead of “wrong”, “biased” or “dismissed”, we somehow let social constructionism get into the realm of scientific realism, which brings along epistemological relativism. Social ontology and scientific materialism, nominalism and realism, discourse theory and how the world really is, metaphysics and mechanical concepts of physics would merge there in an unorthodox reading, aiming to extend and reshape the traditional concept of reality and knowledge. We can now proceed until we don’t know anymore where we are supposed to draw the line between discursive and non-discursive facts, nor if we are allowed to do that at all, following metanarratives and considering scientific knowledge itself as a kind of discourse (Lyotard 1984 [1979]). This state stands at odds with the scientific ambition to describe the world as it is independently from the observer (pulsars were there before humanity could describe them). This contradiction became gradually clear to Hacking himself. In fact, some years after the proposal of the distinction between natural (indifferent) kinds and social (interactive) kinds in science, Hacking dropped such idea:

many commentators of Ian Hacking seem either to disregard or to be unaware of the fact that from 2002, in his lectures at the College de France, he questioned the dichotomy between interactive kinds and indifferent kinds. The distinction he draws between natural and social sciences remains unchanged, but he gives up the idea that there exists a homogeneous class of natural kinds. [...] Ian Hacking also declared that he had been too much influenced by psychiatric diagnostic in his historical ontology. (Delille & Kirsch 2016: 89)

Consequently, we find ourselves again facing the method/object contradiction. DSM entities are proposed within medicine, a traditionally empirical materialist science, but they regard the mind or soul, an abstract metaphysical entity coming from a theological tradition. If we accept the social ontology of mental illness (after all, had they been brain issues, they would be treated by neurology), those entities, or kinds, are to be placed next to money, genders, laws, social groups, arts, disability etc., and we are not in the position to advocate for their irreality anymore, as long as their reality comes from a social agreement around their existence. Therefore, the temporariness of their reality would only rely on the doctors' belief in their existence (justified or not) and in their application onto society, which reacts accordingly.

This analytical *impasse* is a kind of tendency Hacking sometimes touches along his arguments, although he never embraces it openly as an analytical praxis. Let's see this more closely. On the one hand, when he wants to see some category erased, he invokes a new reorganization of kinds, as in the case of Pierre Janet's dissociation (or at least, psychiatry's understanding of it):

In twelve years' time, in 2009, I would like to observe the very last congress at which the dissociative disorders, including dissociative identity disorder, were treated as autonomous illnesses. I would like to see the entire conceptual

organization, of multiple personality (dissociative identity disorder), dissociative fugue, and dissociative amnesia, disintegrate, with the symptoms dispersing into a new conceptual organization. Moreover, and this will be offensive to many, I hope that post-traumatic stress disorder, far from absorbing these other disorders, will also disperse and no longer be a usable classification. Finally I hope this will happen as a result of sustained inquiry. The sustained inquiry matters. (Hacking 1998: 99-100)

In such a congress, quite contradictorily, one would be witnessing the vanishing status of some “Transient Mental Illness” when it was not “transient” yet, but still “real”, backed by the vectors of an ecological niche, by medical taxonomy and observability as the conditions within which the Justified False Belief was possible. With the suggestion that an ecological niche may provide all the sufficient and necessary elements for scientists to be warranted to believe something wrong, or unreal, we find ourselves precisely on the fine line towards social constructionism, though the author openly refuses such labeling (see *The Social Construction of What*, 1999). Here, a discursive-like argument is proposed as explanation for past mistakes, namely: doctors were warranted to believe they were observing an non-existing object because an ecological niche was there in place. On the contrary, when Hacking wants to see some other category or kind maintained, he seems to be going the opposite way. Particularly interesting is the author’s belief in schizophrenia:

Some mental disorders are, in my opinion, real. In the case of schizophrenia, for example, despite the conflicting claims, I hope that within twenty years we shall have a grip on one or two or perhaps three fundamental types of schizophrenia [...]. What I hope is that schizophrenia will emerge as one (or several) bodily dysfunctions, neurological, biochemical, or whatever, which we shall be able to help or cure in a theoretically well-understood and a practically well-articulated

way. [...] If this hope is fulfilled, then schizophrenia is a real disorder, or perhaps several distinct real disorders are at present called schizophrenia (Hacking 1998: 98-99)

More than twenty years have passed since, and the discussion about the reality of schizophrenia is still on the run. Some researchers are still asking whether or not schizophrenia exists (See Georg Repnikov, 2023: *Does Schizophrenia Exist?*), others hardly answered it does not exist and invoked the elimination of the term (See Jim van Os 2016: *“Schizophrenia” Does Not Exist*).

Here, Hacking’s argumentation overlooks social ontology and goes straight towards materialism (mental disorders would be real if they were brain issues, neurologically, biochemically rooted), a chance which actually does not represent a happy scenario for psychiatry, as such a discovery would most likely move its kinds back to neurology and make of psychiatry a pure pleonasm. This explanatory blurring of Hacking, standing both for and against social constructionism, reflects an analytical *impasse* to the extent that it gives a partial elucidation to the genealogy of specific cases while leaving unanswered the most fundamental issues about the divorce between realism and idealism, or, otherwise, between materialism and nominalism through the discursive framework. By accepting the new nomenclature as a reliable replacement for the old dismissed system, without trying to understand what kind of shift in theory may legitimize the creation of a new taxonomy, we are in fact falling into a circular loop, simply entering a new “ecological niche” without questioning the critical factors which led to the collapse of the previous one. For these reasons, we suggest we do not use the category of “Transient Mental Illness” to describe the dismissed categories of the history of psychiatry, including hysteria, and prefer the search for, and identification of, specific scientific biases at the very base of the architectural system supporting the groundless paradigm which is still producing those kinds. As proposed above, we are instead inclined to consider DSM and ICD

entities as kinds based only on a social ontology, under a narrative which sometimes includes scientific materialism in its horizon, especially in the form of some hypothetical biological markers, assumed at the origin and yet waiting to be found. A significant step towards a change of paradigm, as we shall see, has rather been taken by the proposal of the transdiagnostic approach (Dalgeish et al. 2020; Fusar-Poli et al. 2019), which may yes constitute a real change of paradigm instead of another revival of Kraepelian premises.

Building on those claims, we are not confident that the new taxonomy could successfully describe what had wrongly been identified by an old one, as the premises and methods of those systems are pretty much the same. We don't see how the epistemological issues represented by the DSM can find a solution within the DSM itself until a radically new set of nosological criteria is established to identify and define its objects (instead of new cosmetic revisions). We join those scholars who think there are good reasons to doubt the new categories can solve the contradictions expressed by the old ones, and will therefore invoke an extended reading of ecological niches as a form of classic epistemic contextualism, thus considered as an unjustified validation system for those frequent rewritings. We would rather point towards a structural shift in paradigm as the solution for past and current *impasses* in the epistemology of psychiatry itself, holding that it is not enough to consider past and current categories as all scientific entities (as long as they are produced by scientists) whose nature and properties are based on a social ontology.

(WERE DOCTORS OF THE DAY WARRANTED?)

Otherwise: did ancient doctors know something? Did they have knowledge, or just false beliefs? If the former, how to define that knowledge?

As a start, we need to slide back to the history of hysteria, and provide a brief focus around some particular moments in the creation of the category, so to further highlight the reasons why we do not consider ancient doctors to have been warranted in believing in the reality of its existence. This may trigger a panic epistemic relativism around the definition of knowledge, which we will do our best to avoid.

As seen above, Hacking's reflections on the reality of dismissed kinds of psychiatry inclined towards the consideration of their *ecological niche* as warranty, or justification, for doctors who have been observing them for decades (point 3 above). His position suggests some intriguing parallelism with epistemological justificationism on an historical base, a correspondence that may be worth an exploration, questioning the very meanings of knowledge, as well as the distinction between knowledge and belief. Did ancient doctors have knowledge, while holding the reality of hysteria? Do contemporary doctors have knowledge, holding the reality of somatic symptom, conversion or dissociation disorder? Or did they (do they) simply acquire a form of belief through the training that socialize them within a nosological system, which may or may not represent the world as it really is? We hope the question will not seem irrelevant.

When we deal with the distinction of knowledge from belief, "practical problems arise especially in two certain fields of discourse: science and religion. Religion relies on what people believe" wrote Juliana Goschler, whereas "unlike religion, science is supposed to rely on what people know. But even most scientists would agree that this 'knowledge' is never complete" (2007: 31). And so are not its warranties, we add.

Hacking wrote that doctors of the time were warranted to believe that hysteria (or hysterical fugue) existed, *being justified* by observability, release, medical taxonomy, cultural polarity in an “underlying agreed conceptual structure”:

I asked whether nineteenth-century beliefs were warranted. Unlike true, the praise word warranted is relational. A belief is warranted relative to available evidence and an underlying agreed conceptual structure. In 1997 a belief in the hereditary and neurological character of hysteria would be completely unwarranted. It was warranted in France in 1887. (Hacking 1998: 91)

We think there are very good reasons to doubt so, and here’s why. Indeed, doctors have been (and still are) socialized within a certain model of understanding. In the end of the XIX century, however, some of them were told a cluster of behaviours were to be called hysteria, some others pithiatism, others psychastenia, as we shall see. Different physicians had different theories around the same set of dysfunctional behaviours. So unless we consider social narratives as a fair justification, we have to acknowledge that none of the trainees was scientifically warranted to believe. It may be enlightening to bring those arguments into the frame of the classical epistemological problem of knowledge as Justified True Belief. Following Gettier, we may develop the logic series of consequences about knowledge attributions connected to that specific case, and ask ourselves: can we claim those doctors had knowledge? And more broadly: can we still claim that knowing is only *knowing something true*? To address those questions, it may not be useless to first operate some distinctions. Distinctions about the nature of “the scientific community” as discursive representation; distinctions about the status of the true/false demarcation in relation to a historical scientific model; distinctions regarding the objective character of knowledge and its additional features as an understanding, feeling or thought, and as a socialization process. We will do that in a moment.

According to objective knowledge, the answer to that question (*did doctors of the time have knowledge?*) should be “No”, as the objects of their experience did not exist according to the later model. As long as the Gettier symmetry goes, we could claim that while seeing a mirage in the desert, doctors believed there was an oasis behind the dunes (Gettier 1963). However, in the specific case of psychiatry’s ontology, methodology of research and diagnostic means, we know it is still not possible for a psychiatrist to go over the dune and materially confirm or deny a diagnostic hypothesis, as no test can verify nor falsify DSM diagnoses.

Nevertheless: how many practitioners of psychiatry today would claim they do not know about the reality of DSM or ICD categories? How far can we bring the discrepancy between knowing and believing, and how does the new taxonomy represent a better warranty for knowledge? The more one analyses current and former psychiatric nosology, the less clear such demarcation. Not only we endorse Gettier in claiming that justifications do not guarantee knowledge attributions: we also question the very distinction between scientific knowledge and belief within this medical branch, as well as the criteria to separate truth and falsehood of the entities based on a social ontology.

Let us try to go further on that without falling into relativism. One may state that “scientists *know* that the speed of light is a constant”. They do not *believe* it, they *know* it. But in that case we would have to acknowledge they know so despite, according to some, the value of the speed of light seems to have dropped worldwide between 1928 and 1945. This did not prevent metrology from fixing the speed of light by definition in 1972, or from redefining the meter in terms of speed of light. Something alike happens with the gravitational constant, whose status of constant actually originates from an average of different measures, varying from place to place and from time to time (on those topics, see Sheldrake 2012). Even in the most demanding fields of the sciences, like physics, where standards are the highest, trainee

scientists have been taught a series of premises about the world within an educational process. Some of those premises will never be empirically tested by the trainee, nor doubted or questioned, they are simply learned and applied in the labour market. This ambiguity between truth and dogma (see Kuhn 1961), and between knowing and believing, gives us the opportunity to elaborate more on Gettier's critics of knowledge as Justified True Belief and to further consider the role of validity contexts in the social epistemology in psychiatry, extending the relativistic view to scientific knowledge, and mental illness as well (Longino 2022; Feldman 2001, 1999).

The classical account of knowledge as JTB (S knows that P if and only if: P is true; S believes that P; S is justified in believing that P) never recovered from the critics of Edmund Gettier. All attempts to patch up the traditional analysis in order to evade Gettier have been struggling in vain. Tracking theory, reliability, relevant alternatives, safety condition, causal connection between justification and belief, truth probability, falsehood exclusion... no proposal could really settle the issue. Several authors have been searching for new conditions to escape Gettier's counter-examples, including Sosa (1999), Dretske (1981), Nozick (1981), Goldman (1967), and more, but still no convincing solution for the problem has been found. It seems that all possible justification will eventually suffer some sort of fallibility.

Beyond justificationism and the theory of knowledge in epistemology, the core of the issue may be more deeply embedded with the other two terms of the JTB problem: on the one hand the cognitive status of "belief", meaning here the *action* to believe something and stop doubting, stop searching for more evidence and accept a fact, a dogma or a premise, and on the other hand the distinction between "true" and "false", which is subject to a historic theory or model and raises the issue of incommensurability among paradigms. In the wake of a historical rather than normative philosophical analysis, logics would have to make room for the psychological and social dimensions of human knowledge, better considered as an understanding. Psychological and social relations among individuals are crucial for the production of this understanding, not only on the level of ordinary day by day knowledge, but also

in the more refined and demanding fields of scientific knowledge (as seen in Kuhn 1977). When we part with the idea of objective knowledge, where knowledge itself is the correspondence between what the subject believes (a model) and how the world really is, other variables become crucial, such as the relative, subjective and intersubjective dimensions of knowledge. Here, a social epistemology is needed to address the social ontology of mental illness.

On the other hand, the threshold established for something to count as knowledge can move, the requirements can become more and more demanding, especially within the sciences, according to all the challenges skepticism will launch. Quoting Lewis: “What is true enough in one occasion is not true enough in another” (1979: 352). Additional conditions, new experiments, higher standards can forever be required. That threshold stands on the very border of knowledge, and represents the point where an individual stops doubting, suspends skepticism and starts to believe something (possibly, something true). But, it has been noticed (Feldman 2001), knowledge itself is not a unique nor universal category. Both the everyday context of use of the word “knows” and its conditions required by science vary according not only to the research context, but also according to who is talking to who, for what purpose, in which language, where, when, and so on. The variety of meanings of knowledge discourages the idea that knowledge may be one, unique concept with a unilateral definition and essence. For this reason, it may be more fruitful to consider knowledge as an understanding, also within the sciences.

Secondly, in classical epistemology, P has been mainly considered as a sentence, a phrase. Subject S typically knows the sentence P. But this begs the question: do we only know sentences? Feldman acknowledged that contextualism was a valid semantic thesis regarding how the word “knows” functions in different contexts, but he also asserted that this does not resolve the substantive epistemological issue of whether we actually possess knowledge.

Furthermore, the classic account did not properly consider the role of a wider community in the production of such knowledge. Subject S is mentioned in its own, private relation with the sentence P. However, if we accept that no one develops knowledge alone, in a vacuum, that absence represents a relevant shortcoming. Also, the fact that a willing-to-know subject “S” is always thought as an individual cognitive agent, raises the problem of the disagreement among peers (see Longino 2022: 9). Let’s see how the case of hysteria is paradigmatic on this respect.

As seen above, when Charcot produced the nosological category of hysteria for the first time in medicine, the epistemic community around him was not homogeneous: several doctors disagreed with him. While Charcot described hysteria as a neurological hereditary disease, publicly showing its symptoms through hypnosis at his lessons at the Salpêtrière, his most brilliant colleague and disciple, Joseph Babinski, claimed that the hysterical manifestations, until then taken as symptoms, were nothing more than a pathological state originated by artificial creations induced by suggestion. Hyppolite Bernheim, Professor of Medicine at Nancy University, shared his opinion and provided demonstration that the phenomena observed during the hypnotic treatment of Charcot would only happen when the patients knew they had to happen, supporting thus the argument of suggestion. In Chapter one we also mentioned that, in 1904, Dr. Steyerthal predicted that the concept of hysteria would disappear in a few years. However, it took more than a few years for doctors to stop believing (or knowing) such a disease existed. Also the act of naming the phenomenon was subject to debate. Several doctors of the day (several knowing subjects S) had proposed the creation of numerous scientific objects, with different nosological categories, names, interpretations and descriptions around the same set of behaviours, clinically observed. Psychasthenia (Janet), Pithiathism (Babinski), Suggestion (Bernheim), Somatization (Briquet), Conversion (Freud) were all peer candidates for the reality contest won by hysteria.

Naively, we would possibly be inclined to think that hysteria took over because it was the most precise description, the most reliable theory or the best nosological

category available at the time. But the history of science tells a different story. What made the real difference was not any test or experiment designed to check what category would better correspond to the world and settle the disagreements. The critical factor was rather a change in the political clout within the community: originally represented by the influence of Charcot, soon followed by Babinski, then replaced by Freud's sexual theories.

In fact, nearly every XIX and XX century physician had its own theory about the troubling behaviours that ended up to constitute hysteria. It is not possible to easily claim that doctors in general were warranted in holding hysteria as a real mental illness without eclipsing a good deal of history. From Ivan Pavlov, who believed hysteria to be the result of contradicting stimuli in the cortex (1921) to Andre Breton (Breton & Aragon 1928), who believed hysteria was not a disease but a form of communication, several doctors had vigorously tried to get their colleagues to change their minds over the myth of hysteria and were not accepting such nosological category. As seen in chapter one, Babinski even managed to get the Paris Neurological Society to abandon that name as early as 1901 (see Micale 1993; Babinski 1909). It was Freud who brought it back to life, only to project its domain in the realm of metaphysics. Let us recall that quote:

Dominated by Babinski, [...] Many members confessed openly to what they now regarded as the misdiagnosis of many cases from their earlier medical practice. The meeting on 14 May dealt with the eight topic on the questionnaire: "Faut-il conserver le mot Hystérie?" [...] Everyone present agreed that hysteria had previously been defined much too elastically. [...] Exactly fifteen years after Charcot's death, the most prestigious professional organization neurology dismantled the Salpetrian model of hysteria, symptom by symptom, in two days, just as Charcot had constructed it with such care in two decades. (Micale 1994: 518-519)

We then have to acknowledge that, more than epistemically warranted, scientists had been socially shaped, hierarchically trained to believe that entity existed. That understanding happened through a socialization process, teaching them what to observe and how to categorize it, a procedure that has been deeply examined by Thomas Kuhn in the life of science (1977). Also, an account on the theory of hysteria as a catch-all diagnosis and its character of socially constructed scientific object has long been provided, giving an early account on the social character of psychiatric ontology (Gilman et al. 1993, Didi-Huberman 1982, Veith 1965). As illustrated in Longino's proposal of a Contextual Critical Empiricism, epistemic criteria do follow social vectors as well and are not to be considered purely "objective":

the scientific community is a collection of diverse (though maybe not diverse enough) individuals who bring different metaphysical assumptions, different epistemic values, and different social values to their assessment of problems and data. These assumptions and values play a role in determining the evidential relevance of empirical data. They are not (for the most part) subject to empirical assessment. But their plausibility and consequences can be assessed relative to the alternatives. [...] Individual researchers may have unificationist ambitions and certain contexts may require at least a temporary consensus, but these do not translate into universal epistemic criteria. (Longino 2022: 12)

We should therefore take into account the various communities, identities, agendas, belief systems around subject S when we consider the classical account of knowledge in context and its current validity. We can then operate a first split in that apparently unique epistemic group of "physicians", divided into the smaller factions that were actually making the history of hysteria. On this side of "the scientific

community”, the side of the creators of kinds, theories and laws, we can no longer claim that there was any justification or warranty able to defend the reality of hysteria (Hacking 1995). Babinski, Bernheim, Pavlov, Briquet, Breton, Freud and Janet, to consider only some of the doctors involved in the theoretical modeling of dysfunctional behaviours, all had different opinions about the nosological kind of hysteria. How can one say that Charcot’s version was more reliable or justified than others? How can we say it was more or less true? Surely, we can claim Charcot himself had more respect, influence, power and prestige within that community, therefore having a different narrative impact on its subjects, but his research methods and theoretical framework did not provide more scientific warranty (Didi-Huberman 1982). On this, let us follow Hacking once more:

During the period 1872–1878 Charcot had become the world expert on florid hysteria. Yet a great turf war continued, because gynecologists and obstetricians, masters of the womb, claimed hysteria as their territory. Charcot’s central theme was that hysteria was a neurological disorder. It was hereditary—that is, only those so disposed by ancestry could develop it. The best way to wrest hysteria from the gynecologists was to declare it to be a disease of both sexes. Male hysteria had always been acknowledged, but usually with a connotation of effeminacy. Charcot found his male hysterics among brawny laborers; there was nothing effeminate about them (Hacking 1998: 187)

Another social separation may have to be considered: the distinction between the epistemic warranty of the nosology creators and the epistemic warranty of physicians who were trained under those creators to embrace an established system of kinds (Kuhn 1994; 1977). Transposing here the ordinary knowledge vs skeptical environment distinction, the good enough reasons for S to believe that P may well apply to a portion of doctors and not even be necessary for another: those who receive

a category already made, a world *prêt-à-penser*. At this lower level, taxonomy becomes little more than a dogma, a blind belief, the standard defined, taught, transmitted system, no longer discussed and applied to the world by means of clinical diagnoses. Only at this level we can claim that doctors of the day were warranted to believe that P. But we have to acknowledge that their main justification for knowing, or believing, was represented by social forces like authority, hierarchy, status and creed, and certainly not by their individual experience, rationality, research, critical thinking or logics.

On this respect, particularly suitable seems to be the reflection on *imagined communities* as presented by Benedict Anderson (1983), whose social constructionism applies well beyond nationalisms and may further match with Edward Said's *imagined geographies*. As daily displayed by mass-media's bold declarations attributed to "the scientific community", epistemic communities as well are imagined, discursive entities. Knowledges in the sciences, or in scientific communities, should then be better considered as political structures, gathered around the definition of reality, its narratives and metanarratives (here we do embrace Lyotard). Accordingly, the issue of belief warranties in epistemology deserves a wide reformulation and a further subdivision, describing the various communities a community is actually made of. In this sense, we may have to revise the issue. When we ask *How were doctors warranted to believe that P?* (being P: "Hysteria is a disease") the most reasonable answer seems to be: they were trained to believe so.

But are we ready to admit they scientifically knew so?

TAXONOMIC SHIFT AND REVOLUTION

(ARE CURRENT DOCTORS WARRANTED?)

If we accept that entities based on a social ontology are just as real as those based on objectivism and materialism, the case of DSM rewritings comes to represent a specific condition where standards for the attribution of (scientific) truth change according to the model in force, as well as with the epistemic community involved. Not only the threshold of justification is movable, but also the one between true and false. Accordingly, as seen just above here, the epistemological model of reference would become contextualism, where validity criteria, as validation contexts, constantly change the meaning of “to know”. Following Feldman’s remarks on epistemic contextualism:

The central contextualist idea is that the truth conditions for attributions of the word “knows” vary with context [...] Depending on how one analyzes “knows” the details of this argument will vary. For example, suppose that knowledge requires justification. The word “justified”, it might be said, is context sensitive. As a result, “knows” is context sensitive. [...] Suppose that knowledge requires reliable belief information. “Reliable” is itself a context sensitive term. Hence, “knows” is context sensitive (Feldman 2001: 62, 65)

If a belief begins when we suspend doubting and just start to assume something, we can consider it, in a sense, as a mode of dogma. This premise, assumption or precondition can be true or false not accordingly to an objective take on reality, knowable by subject S, but only within a theory and model socially promoted:

whether S knows that q depends, in part, on intersubjectively determined standards. This raises the issue of how precisely those standards are determined. In particular, which social group sets the standards? (Cohen 1987: 14)

Considering the years 1987/1993 as a turning point for hysteria, we should suspect that there was a moment when (universal) standards of knowledge changed, so that a statement that was scientifically true before, was not so afterwards. Without evidence of such a shift, we can not fully trust current kinds. However, epistemological confusion in psychiatry is so serious that MD doctors are still adopting the dismissed diagnosis of “mass hysteria” in 2024 and 2021 scientific papers (see Jeong et al. 2024; Zhao et al. 2021).

As seen, Hacking’s reflections consider current criteria as the meter to measure the old kinds abandoned by psychiatry, endorsing commensurability. According to his point 4, old fugueurs were not suffering from hysterical fugue, they were suffering from dissociative fugue. Hacking wrote that where *hysterical fugue* was not real, *dissociative fugue* is real. This can be a very challenging claim. Dismissed categories of DSM can be considered false or unreal only when observed from the contemporary point of view, within its current model, but such conclusion would probably not meet the favor of Thomas Kuhn or Paul Feyerabend, who, despite their differences, considered different paradigms incommensurable.

Such take embraces a realist view: names have changed over a persisting reality. And yet, that conclusion is motivated by the nominalist idea that a change in taxonomy may constitute a sufficient condition for the identification of a scientific revolution. This seems to be particularly dubious in the case of psychiatry’s DSM rewritings, as we shall see, but may be relevant for other scientific endeavours as well. Let us quote that key passage again, relative to the disappearance of hysteria:

This is a rare unequivocal example of a scientific revolution, in the sense of Thomas Kuhn's last work. One taxonomy replaces another, to the point that we simply do not know what hysteria was any more. (Hacking 1998: 72)

Such a reading is bringing Kuhnian theory somewhat too far. In our readings, we could not find a single passage where Thomas Kuhn's *Second Thoughts on Paradigms* could provide the basis for such a conclusion, although his editors once wrote somewhere else that scientific revolutions require changes in the taxonomy provided by scientific language itself (1984). On the contrary, we did find elsewhere a passage of Kuhn's *Afterwords* (1994) where the author himself graciously took distance from Hacking's reading of his opinions:

Though the solution he [Hacking] describes was never quite my own and though my own has developed substantially since the manuscript he cites was written, I take immense pleasure in his paper. [...] His nominalist version of my position [...] does not quite face my problems. The reasons are numerous. (Kuhn 1994: 315)

In addition to the author's own remarks, and somehow despite them, we may remember that before a taxonomical shift alone can be described as a scientific revolution, it is still controversial whether or not there have ever been, throughout history, scientific revolutions in the strictly Kuhnian sense. Moreover, the definitive meaning of what exactly is a Kuhnian revolution still represents an object of debate in the philosophy of science. However, even when we follow the interpretation outlined by Kuhn in *Second Thoughts on Paradigms*, we soon realize that a taxonomical shift is not represented there as the essential factor determining a paradigm shift, albeit it may complement a change in scientific thought, but more as a part of the set of

problems, solutions, metaphors, matrixes, symbols, associations, habits of perception a scientific community transmits to its trainees. His reconsideration of “paradigms” does not necessarily imply a redefinition of the revolutionary fact. Indeed, some of the scientific revolutions mentioned by Kuhn in his earlier works did not imply major changes on the taxonomic level. Consider the Copernican Revolution. Although intertwined with broader philosophical and theological beliefs, that scientific shift maintained much of its objects (the planets, for instance) with their previous names, while operating a drastic transformation on the level of their relations, interactions, gravitations, motions and positions. “After Copernicus, astronomers lived in a different world”, wrote Kuhn (1962: 117), but many objects of such new world, remained pretty much the same, and so did their names. Of course the Greek “two sphere universe” model was dropped, but most of the entities maintained their taxonomical designation as it appeared before. The Moon gradually lost its status of planet, Uranus obtained it in 1781, but their ontology stayed untouched. Nonetheless, a scientific revolution happened, indeed.

While we can consider a taxonomical shift as a part of some scientific revolutions, or paradigm shifts, it seems not reasonable to establish it as a sufficient or necessary criteria to define it. Further elements have to be taken into account. In the specific case of hysteria, the decisive factors that lead to abandon that entity were widely related to a social, cultural change of narrative, rather than a scientific discovery of any new evidence. We then have two options: whether we spouse the sociological idea of science as a human endeavour defined by a socio-political context, or we follow the idea that what caused the refusal of such a long-held belief had nothing to do with “science” or, at least, with the old idea of anything like a value-free, objective, pure scientific research, independent from social factors. The same applies to homosexuality, diagnosed as a mental illness until 1973, although with the relevant distinction that homosexuality does exist and has merely been depathologized. This brings us straight to Jerome Wakefield’s question about “what makes a mental condition a disorder” (see Faucher & Forest 2021, Brülde 2007).

A few more arguments keep us from following Hacking in claiming that the erasure of hysteria would represent a scientific revolution. First, if we were to admit the coincidence of taxonomic shift and scientific revolution, we should then claim that having discovered (or decided) that homosexuality was not a mental illness would represent the 1973 scientific revolution in psychiatry. This may excessively diminish both the concept of scientific revolution and the dignity of psychiatrists. Second, the chronological comparison between DSM rewritings and some classical examples of scientific revolutions discourages the equation “taxonomic shift” equal to “scientific revolution”. If we take some cases of paradigm shifts mentioned by Kuhn (1962) in the fields of the natural sciences, we can find seven changes along four centuries:

1543 – The transition from a Ptolemaic to a Copernican cosmology;

1687 – The transition from Aristotelian to classical mechanics;

1783 – The acceptance of Lavoisier's theory: the chemical revolution;

1859 – Charles Darwin's natural selection;

1905 – The development of quantum mechanics;

1916 – Einstein's special (1905) and then general (1916) theory of relativity;

1965 – Discovery of universal background radiation: the big bang theory;

On the other side, when we then consider the DSM revisions alone, even excluding ICD, we find ten reformulations in only seventy years:

1952 - DSM-I: Diagnostic and Statistical Manual: Mental Disorders

1965 - DSM-I Special Supplement: on plans for revision to better align with the International Classification of Diseases

1968 - DSM-II: 2nd Edition

1973 - DSM-II 6th printing change: Elimination of Homosexuality as a mental disorder and substitution of the new category Sexual Orientation Disturbance

1980 - DSM-III: 3rd Edition

1987 - DSM-III-R: 3rd Edition—Revised

1994 - DSM-IV: 4th Edition

2000 - DSM-IV-TR: 4th Edition

2013 - DSM-V: 5th Edition

2022 - DSM-V-TR: 5th Edition—Revised

If we accept the equation “taxonomy change” equal to “scientific revolution”, we then have to consider that psychiatry alone passed through ten scientific revolutions in seventy years, rewriting its own kinds more often than any other scientific discipline ever existed. Unlike Hacking, we claim a scientific revolution in psychiatry has never taken place yet, and that the closest step towards it is currently represented by the transdiagnostic model, which is reconsidering not only the names given to behaviours, but is suggesting “the alternative conceptualizations of the processes implicated in mental health, and provides a platform for novel ways of thinking about onset, maintenance, and clinical treatment and recovery from experiences of disabling mental distress” (Dalglish et al. 2020: 179). Those elements, yes, might be considered indeed as a proper Kuhnean revolution.

According to scientific discourse, a progressive evolution, refinement or transformation of knowledge provides at each step an improved understanding and more accurate descriptions of the world, made of facts that supposedly have always been there and of scientists who progressively discover them. Under this narrative, we should then assume that in the past two centuries some diseases would have wrongly been identified as belonging to a certain kind, then recognized as unreal in light of a new discovery, model, or fallacy in identification. This also implies that a dismissed kind has actually never been there to be observed, and that scientific belief in it was but an illusion. The history of phlogiston and oxygen provides an example of such evolution (Kuhn 1962). According to this discourse, it is the discovery of a better model of understanding, a new comprehension of reality, that produces new kinds, able to provide a better explanation of long observed facts, together with more accurate predictions, and also able to account for past inaccuracy and failures. We suspect DSM rewritings represent more the outcome of deep epistemological confusion than a proof of any scientific revolutionarism. Beside the frequency of such changes, it is remarkable that recent DSM and ICD nomenclature models both went back to Kraepelin's *Compendium der Psychiatrie*, of 1883, often developed against the late ideas of Kraepelin himself: a descriptive model where observation of symptoms becomes the diagnostic criteria itself (see Heckers et al. 2021).

The evolution and self-correctiveness of scientific research is precisely meant to bring up a better description of reality, a model that better corresponds to the world and can predict its behaviour. Those changes in theory may have been motivated by an advance in theory, by the identification of some kind of bias, by some discovery or paradigm shift enabling scientists to explain or predict something the old system of categories could not. Contrary to this narrative, though, the nosological paradigm of psychiatry seems to be still clinging to its old-fashioned Kraepelian model, which considered mental diseases as natural kinds, despite several sources have long been suggesting the deep need for a new medical paradigm (Heckers 2021; Wade &

Halligan 2017; Wade 2006).

A change in scientific taxonomy might be a complementary condition for scientific revolution, but is not regarded here as a sufficient one. The way DSM editors group phenomena and accomodate cognitive objects about human behaviours did not change its premises. As many scholars have already pointed out, a revolution is much needed in psychiatry, but hasn't happened yet. For those reasons, unless we want to embrace the idea of science itself as socially constructed, which we do not endorse, we claim the eliminations of hysteria, homosexuality, multiple personality and more, have rather to be considered merely as minor bias corrections in a disappointing general epistemological chaos.

CONCLUSIONS

The history of hysteria provides a great illustration of the fact that knowledge within psychiatry is not only subject to scientific criteria in the more strict sense. Among the factors that may contribute to the definition of a kind, there is also a formidable deal of social ontology, bringing current psychiatry on the verge of behavioural social sciences. Only admitting such social ontology as an equal player next to objectivism in the scenario of scientific realism, can one accept the scientificity of DSM nosological constructs. In fact, even though there have been many contradictory positions, contrary evidence and voices of disagreement within the scope of investigations into hysteria, for a long time the mainstream discourse did not question its reality. We have seen that, within the same historical and cultural context, the symptomatic descriptions advanced by Charcot were refuted either by Babinski, Steyerthal or Bernheim, among others, who radically denied that there was a definable entity, a disease called hysteria, and formally demonstrated that the phenomena produced in the hypnotic treatment of Charcot happened exclusively when the patients knew they should happen. This is where the criteria for validating knowledge admit the most varied social factors, supposedly extra-scientific, such as power, prestige, hierarchy, status, intention, or leadership. Thus, in the analysis of scientific knowledge we may have to take into account that an individual (let's say a practitioner doctor) will know that P when a community (teaching her-him) admits that P.

If we can claim doctors of the day were holding a justified false belief, we can do so only from the standpoint of a contemporary paradigm, and only remembering that an ecological niche is always at work, discouraging the idea that current assumptions can be more true than the old dismissed ones. Therefore, the true/false distinction included by definition in the JTB account of knowledge is a problematic and even contradictory one. Classical justificationism alone does not provide a satisfying tool able to define knowledge in epistemology. A number of additional factors, from psychological to sociological variables, from authority to paradigm shifts, from linguistics to narrative takes, sharply intervene as decisive factors for the definition of knowledge, both in everyday life and in scientific fields. Thus, it is very unlikely that we can attribute or

deny knowledge to some social player on an objective basis, even more so when dealing with entities rooted in a social ontology.

We may consider the relativistic view even further, speculating that anytime a subject is sure of something, she or he knows something; this would imply that also when knowing something wrong, we know something nevertheless. In this view, knowledge may be treated both as a feeling, an understanding and as a mode of belief, leaving the question of evidence and warranty open to discussions.

While refusing the definition of hysteria as a Transient Mental Illness, we explored how the fact that a certain category does not conform to scientific standards of its time does not prevent the scientific community from believing in it, using it, transmitting it. In this sense, we can claim that, in order to progress, science also needs non-scientific concepts. Although hysteria was not “real” in terms of the scientific materialism that supported the paradigm of the time; although disagreement among peers was presenting numerous relevant alternatives; the belief in hysteria did produce numerous realities. What doctors, mental hospitals and other institutions have done on the basis of a “false belief” existed nevertheless, although their reasons, belief systems and methods were standing on the threshold of scientificity, as do many of current DSM categories today:

Ludwig Wittgenstein said that in psychology there are experimental methods and conceptual confusion. [...] We have more than that for the mental illnesses. We have the clinical methods of medicine, psychiatry, psychology; we have the innumerable variants of and deviations from psychoanalysis; we have systems of self-help, group help, and counselors including priests and gurus; we have the statistical methods of epidemiology and population genetics; we have the experimental methods of biochemistry, neurology, pathology, and molecular biology; we have the theoretical modeling of cognitive science; and we have conceptual confusion. (Hacking 1998: 10)

CHAPTER 4

THRESHOLDS:

HYSTERIA ACROSS HUMANITIES AND THE SCIENCES

RESUME

The history of nosological category of hysteria provides, as seen so far, an ideal ground to debate over historical revisionism, the social construction of scientific facts, and the demarcation problem in the philosophy of science.

In chapter four, we take interest in exploring how it furthermore discloses significant twilight zones between medicine and philosophy. Some of those pivotal porosities engage with the interdisciplinary level, showing the profound interlace of concepts and knowledges between empirical sciences and metaphysics; others come redefine the epistemological and ontological domain, challenging the models adopted by scientific research to give reality a shape. In this chapter, we consider three of such liminalities.

The first threshold we will to explore stands across the body-mind distinction, showing that both medicine (namely psychiatry) and psychology (psychoanalysis) are still largely relying on a model of the psyche conceived as a metaphysical entity based on a physical body. The history of Western theoretical construct of the mind is taken into consideration with regard to its relations with traditional roots and the evolution of the neurosciences, progressively involved in its redefinition. We will see not only that the construct of the mind depends on

the physical body, but also how a materialist scientific model still rests on immaterial religious-metaphysical assumptions, representing an intriguing subject for the integration of complementary scientific disciplines based on a theological belief.

The second threshold, which may be considered as an extension of the former, unfolds on the connection of semiology and medicine under the interpretation of bodily signs as biomarkers. In and out of the clinic, other hysterias will be described, as before and beyond DSM/ICD standards several physicians, philosophers and anthropologists have proposed to look at “hysterical” behaviours not as mere indicators of disease (symptoms), but rather as human acts of communication. The views of Breton, Szasz, Lacan, Žižek and Ong are collected as defining another relevant liminality that has accompanied hysteria across multiple variations of its existence, the overlappings of which, in our view, may constitute its ultimate essence. The concepts of *agency* and *embodiment* are proposed as guiding constructs able to bridge such threshold.

Finally, a wider look is given at the life of metaphors in the history of hysteria. The epistemic heterogeneity accompanying its evolution, and eventually its dissolution, included not only the above mentioned metaphysical assumptions as well as some socially-produced scientific facts. The social ontology of hysteria also involved, or produced, the extensive use of metaphors to help transpose systems of meaning from one theory, or domain, to another. We hence analyze some of the metaphors that integrated the medical gaze through a narrative, a meaning and a purpose. Entering again in debate with Szasz, who considered such metaphors as a hallmark of pseudoscience, we rather regard at their deployment as a common tool adopted by scientific reasoning to validate theories, practices and conclusions, suggesting that the use of metaphors is not the best place where to look for psychiatric epistemological fallacies. Instead, we argue that a dimension of the scientific imaginary engaged with metaphors to produce a specific perception of the feminine, an ontology of mental illness and a

set of epistemological criteria capable to identify medical taxonomical kinds. Such representations have the power to function as producers of a discursivity within scientific realism.

FIRST THRESHOLD⁷

PSYCHOPATHOLOGY, MEMORY EDITING, TALK THERAPY: PHILOSOPHY OF MEDICINE ON THE BODY–MIND FRONTIER

RESUME

Medical history of psychopathology is, to some extent, the history of the overlapping traditions of Cartesian-Platonic dualisms 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

⁷ The content of this paragraph has been published as *Psychopathology, Memory Editing, Talk Therapy: Philosophy of Medicine on the Body–Mind Frontier*, in «Histories», Vol. 6, No. 8, 2026, pp. 1-17.

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consciousness, organic life and intergenerational potential.

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

(Wilde 1906: 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: 649)

FOREWORD

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 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 for writing of this paragraph, whose purpose is to explore some twilight areas between philosophy and science through the history of psychoanalysis and dynamic psychology.

In this section 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 paragraph, 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.

To begin, let us recall Freud's meta-psychological assumptions (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: 7) or "Hysteria is a collection of illnesses based on representation" (Strumpell, in Janet 1911: 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 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: 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*: 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: 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 (Freud 1954). Physical reductionism has been invoked to try to evade the issue. Yet, the location, the origin or the organic support of "hysteric" 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 descriptive 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 pharmaceutic 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: 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: 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: 226–27)

This extra element, we argue, is meaning.

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 Psychoanalysis*, 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. (Freud 1981, vol. 16: 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: 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 believingly posit in the past; in recollection, what is not now (which is inherent in all phantasy) re-presents a past.

[...] 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 memory 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.

[...] 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: 215, 228, 238)

Years later, in the wake of an analogous intuition, Borges (1999a: 74) wrote about a metaphysician of Tlön, according to whom "the future has no reality except as present hope, and the past has no reality except as present recollection". 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: 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: 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. (Freud 1981, vol. 16: 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, Freud (1981, vol. 7: 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: 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 strings, 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: 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: 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: 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: 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: 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.

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 & 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 2023, 2013). 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 “translational 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: 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: 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. 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: 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: 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: 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 something 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: 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: 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 sentence 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: 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: 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: 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: 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: 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: 951). “Descartes believed that animals have no minds, but are merely complicated automata”, wrote Russell (1927: 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 1928, 1921; Alzheimer 1907; Kraepelin [1904] 1968; Broca 1861). 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: 641–42)

A further exploration of mathematical set-theory relations may proceed beyond identity ($=$), following more interactions like belonging (ϵ), 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: 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 (1960, 1953), 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: 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: 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: 225)

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: 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: 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: 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" (1927: 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 (1927: 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: 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. 2006, 2000). 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 2025, 2014; 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 Blackinston 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: 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.

Before we let this stream get too far away, let us rest here on this topic, and start evaluating the relations between meaning and the social body in the semiology of behaviours.

SECOND THRESHOLD ⁸

SYMPTOM, SIGN, MEANING. DORA, EMBODIMENT AND THE SEMIOLOGY OF BEHAVIOURS

RESUME

On the basis of medical anthropological literature and the feminist critique around Freudian theory of hysteria, in this paragraph we here consider the concepts of embodiment, agency and crisis of presence as guiding principles for a context-sensitive understanding of dysfunctional behaviours as means of communication within the study of symbolic systems.

With an interdisciplinary and comparative approach, the Dora case is represented next to an ethnographic research where mass hysteria was medically diagnosed over spirit possession seizures in Malay Western factories. We explore the status of dysfunctional behaviours as bodily signs, invested with cultural meanings representing social distress, gender inequality and structural violence.

The ideas of Mary Douglas and Thomas Csordas, Jacques Lacan, Thomas Szasz and Ludwig Binswanger are here combined to outline a semiology of behaviours able to account for the phenomenological reality, inside and outside of the clinic, of a social body enacting as living metaphor.

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*What we perceive are "first and foremost" not impressions of taste,
tone, smell or touch, not even things or objects, but rather, meanings.*

(Binswanger 1963: 114)

Being left alone, per se, apparently is not considered a sufficient cause for feeling anxious.

Hence, if such a reaction occurs, it must be due to something else.

The meaning of being left alone is then advanced as the cause of the "abnormal reaction".

(Szasz 1974: 86)

In the pages of *On Being Ill* (1926), Virginia Woolf remarked on the prominent role the mind has been given in literature, vindicating the intertwined relation between the body and *the creature within*:

With a few exceptions [...] literature does its best to maintain that its concern is with the mind; that the body is a sheet of plain glass through which the soul looks straight and clear, and, save for one or two passions such as desire and greed, is null, negligible and non-existent. On the contrary, the very opposite is true. All day, all night the body intervenes [...] The creature within can only gaze through the pane—smudged or rosy; it cannot separate off from the body. (Woolf 2012: 32-33)

Human body and behaviours are not considered anymore as mere facts of nature. XX century reflections progressively rescued the body from materialism and placed it at a symbolic crossroads, a junction where an exchange of meanings takes place, one between organic matter and social-psychological reality.

Particularly under the sway of phenomenological and anthropological

influence, behaviours gradually came to be considered as a culturally shaped medium of expression. As early as 1935, Marcel Mauss dedicated a pioneering, comparative research dedicated to what he called “*les techniques du corps*”. Presenting his work before the Parisian *Société de Psychologie*, he there defended that there can be no such thing as a “natural behaviour”, in the light of the cultural variations provided by comparative studies and ethnographic research. In the same work, he proposed the notion of habitus, later developed by Pierre Bourdieu (1980, 1972) and described the cultural and social shaping of bodily techniques, foreseeing that human behaviours would soon take their rightful place within the study of symbolic systems.

Under his influence, contemporary social sciences came to describe the body as a proper experiencing agent, as the result of an ongoing negotiation with social, political, economic, historical forces that mould it, and in turn are influenced by it. In her 1970 *Natural Symbols*, anthropologist Mary Douglas further theorized the concept of “social body”, a cultural entity which “constrains the way the physical body is perceived”. As she argued, physical and social bodies are in a dialectic relation: “The physical experience of the body, always modified by the social categories through which it is known, sustains a particular view of society” (2002 [1970]: 69). Both in everyday life and in the collective representations about its place in the world, human body progressively came to be considered as a complex, integrated cultural product:

The forms it adopts in movement and repose express social pressures in manifold ways. The care that is given to it, in grooming, feeding and therapy, the theories about what it needs in the way of sleep and exercise, about the stages it should go through, the pains it can stand, its span of life, all the cultural categories in which it is perceived, must correlate closely with the categories in which society is seen in so far as these also draw upon the same culturally processed idea of the body. (2002: 69)

Conceived that way, the old-fashioned idea of the body as a mere mechanic, material entity has gradually given way to the concept of a body as the medium of an inter-subjective historical and cultural process. Perception itself is perception of the body and through the body, including the very perceiving of the meanings the body displays, produces and reproduces. From Merleau-Ponty to Thomas Csordas and Judith Butler, the notion of *embodiment* progressively came to sketch the outline of an innovative philosophical paradigm, at the junction between phenomenology, practice theory, feminist theory, and post-structuralist discursive thought.

Recently absorbed also within neuroscience in the simplified form of embodied cognition, embodiment aims to describe how human experiences are enlivened, materialized and situated in the world through the body, conceived as a living metaphor at the liminal threshold between environmental, behavioural, biological and psychological domains.

All along the XX century, the scientific status of behaviours has been deeply disputed. Just like the mind, soul or psyche, the very concept of “behaviour” too has been the object of a profound scrutiny in the history of science and psychology, as its ontology appeared to be extremely uncertain and dependent on exemplars to be able to function as reference, or scientific indicator, able to sustain theoretical and applied research. However, trying to evade the problem of the merely assumed character of thoughts and of the mind, which were not subject to scientific observability, behaviours came to represent precisely the perceivable, observable entity from which the mind could be inferred, thus legitimizing psychological assertions. Unfortunately, when the mind was that of an animal, this convenient relation revealed to be somewhat problematical, as the whole set of categories adopted to describe the human mind showed its conventional status of social construction, not easily ascribable to other beings and forms of life.

As many have observed [...], behaviourism's use of the category of behaviour has always been marked by ambiguity. The reason for that lies in the basic incompatibility of the twin goals of the movement. Behaviourists desperately wanted to be recognized as natural scientists, and, to the degree that their image of natural science included good old-fashioned mechanistic materialism, they would emphasize that behaviour was ultimately reducible to physical movement. (Danziger 1997: 98)

Moreover, even accepting the reduction of behaviours to a mere set of movements, it was noted that such movements were likely to appear in a context, as the experimental data provided by psychologists were always the product of a social interaction. To clear the ground from such variables, the lonely rat in a maze became the prototype of experimental praxis:

In their interpretations of experimental data, psychologists had traditionally tried to ignore the fact that all such data were the product of a social interaction [...]. In animal learning experiments, however, they had managed to construct a situation in which human communication had been eliminated once and for all. The subjects whose behaviour provided the prototype for behaviour in general were speechless subjects. They lacked the means for participating in a language community with their controllers or anyone else. 'Behaviour' was basically an attribute of singular, non-communicating individuals. (Danziger 1997: 99)

In the 1920s, against such reductionism, psychologist and linguist Karl Bühler got to incorporate behavioural data in a richer, more scientifically accurate synthesis. Inspired by the work of von Frisch on the language of bees, Bühler chose a different

animal to serve as prototype for the definition of behavioural entities: neither a solitary rat in the maze, nor a problem-solving primate were his exemplar, but rather the communicating bees. Such a decision was not a minor one, as the very choice of a certain animal over another as a reference was influenced by specific sets of assumptions on the one hand, and could orient research towards some expected results on the other:

[Bühler] took it for granted that the kind of animal behaviour that would be most relevant to human behaviour would have to be communicating behaviour. For Bühler, humans were fundamentally communicating creatures, and the psychological work of his mature years was mostly devoted to the study of language. The point here is not whether Bühler was right and the rat runners were wrong, but that the choice of the exemplars which give meaning to abstract 'behaviour' depends on culturally determined preconceptions about the fundamental nature of human conduct. (Danziger 1997: 100)

In the light of such debate, the concept of behaviour as it will be adopted here does not represent much a set of movements allowing the scientific gaze to infer mental qualities, but rather as an act of communication, as well as an outcome of a process of socialization and embodiment of cultural traits, meanings and relations.

Therefore, while trying to understand the meaning of behaviours, sufferings or symptoms, as they appear in the clinical context, we consider that the nervous system may come to represent the biological and semiological interface of such a dialectic, bridging medical materialist reductionism, behaviourism and mental, abstract, subjective human experience under the phenomenological gaze. One may also consider the idea of *memory embodiment* as a fruitful tool to fill the traditional body-mind gap and further support the relevance of an inter-disciplinary threshold where to

design a field of analysis.

Once the body is considered as a part of a wider symbolic system, then human behaviour becomes symbolic to the extent that it constitutes a *corporeality*, deeped in a set of meanings which are subject to the rules of cultural transmission. Such meanings are socially and culturally organized, individually reinvented and do not conform to the universalist requirements of mechanistic models, but rather respond to a specific cultural mode of living and existence, namely a subjective relation within socially determined historical forces, integrated values and narratives. As the body gets to learn and incorporate meanings, feelings, and emotions, it also gets to perceive them and exchange them in local terms, becoming part of a wider cultural and social organism. In the hands of a subject, the experience of the body becomes itself a mean of communication. As Merleau-Ponty described in 1945:

The experience of the body leads us to recognize an imposition of sense that does not come from a universal constituting consciousness, a sense that adheres to certain contents. My body is this meaningful core that behaves as a general function and that nevertheless exists and that is susceptible to illness. In the body we learn to recognize this knotting together of essence and existence. (2012 [1945]: 148)

While existing through organic tissues, meanings transcend the physical matter and yet require the very living performance of a body (behaviours) to interact with a system of signification and so participate in the arena of invention, negotiation, modification of social conventions, norms and practices. The consideration of such dynamic integration provides us with an insight over the feeling that “the hysterics and the psychosomatics know by heart: namely that our body is an organism of symbols, and that there may be conditions in which symbols undergo a dramatic transformation” (Manganelli 2001 [1992]: 43). However, parting from traditional

medical assumptions, this transformation may not be exactly attributable to processes like “somatization” or “psychosomatics”, as we shall see below. Again, Merleau-Ponty provided a much refined take on such struggle over signification and re-signification through the body:

The sense of the gesture is not contained in the gesture as a physical or physiological phenomenon. The sense of the word is not contained in the word as a sound. Rather, it is the definition of the human body to appropriate, in an indefinite series of discontinuous acts, meaningful cores that transcend and transfigure its natural powers. [...] A system of definite powers suddenly decenters here and there, breaks apart, and is reorganized under a law that is unknown to the subject or the external observer, and which is revealed to them in this very moment. (Merleau-Ponty 2012: 200)

In the above quoted prose of *On Being Ill*, Virginia Woolf further delivered a precious literary account of the experience of a patient faced with the challenging search for a language able to convey the living experience of sickness through the limited medical lexicon, which does not account for subjectivity. Thus she wrote:

let a sufferer try to describe a pain in his head to a doctor and language at once runs dry. There is nothing ready made for him. He is forced to coin words himself, and, taking his pain in one hand, and a lump of pure sound in the other (as perhaps the inhabitants of Babel did in the beginning) so to crush them together that a brand new word in the end drops out. (Woolf 2012: 34)

The search for such brand new words, expressed by means of a corporeality,

may well have been an essence of what has once been called hysteria. That outlook towards the body was not totally unknown to French medicine in the XX century, but scientific validation would not make room for its consideration until the end of the century. In the same years when hysteria had been described and established as a neurological disease, the sharp intuition that the “hysterical” body could rather be considered as a forum of a quest for meaning, and that therefore behaviours could be something else and something more than mere symptoms (more than signs of malady) was already present to the mind of some vanguardist physicians. French poet André Breton, well known for being the founder of the surrealist movement, studied Medicine in Paris from 1913 to 1920. In that period, he worked in several hospitals, received psychiatric training under Joseph Babinski at La Pitié, nearby La Salpêtrière, and was furthermore an enthusiast admirer of Freud and Charcot (see Haan et al. 2012; Chevrier 1977). A strong opponent of psychiatric institutions, he “took sides with the socially marginalized mental patients and ascribed their hallucinations and deliriums to an imaginative power [...] considering them a form of creativity that compensated for social stigmatization” (Gorsen 2000: 61).

Some years later, in a surrealist manifesto entitled *Le Cinquantenaire de l'hystérie (1878-1928)*, André Breton and Louis Aragon openly claimed that «Hysteria is not a pathological phenomenon but may be considered a form of expression» (1928: 20), one “beyond all conventions”. The reason why such an analytical perspective had until then been underrated, if not unnoticed, may be connected with a specific medical semiology of the body, where bodily signs were considered as mere indicators of (organic) pathologies under the traditional clinical gaze. The dominant epistemic community had set different standards for the consideration of the phenomenon, and that model guided scientific observation, description, interpretation and explanation. The consideration of those behavioural crisis as conveyers of wider social meanings, which in fact are inter-subjectively defined and redefined, led some doctors to instead to assume that “hysterics” were rather engaged in a resignification of bodily signs, which were inexplicable for

common sense scientific reductionism. Let us quote an interesting analogy to illustrate the logical gap between the observation of a body trait and its connection to a system of reference adopted to understand it:

the colors of the palette or the brute sounds of the instruments, such as natural perception presents them to us, are insufficient to form the musical sense of a piece of music or the pictorial sense of a painting. But in fact, it is less the case that the sense of a literary work is built from the common meanings of the words than that the literary work contributes to modifying that common meaning. (Merleau-Ponty 2012: 220)

A similar dialectic was at work with the medical appraisal of the “hysterical” body, and may still be at play with its nosological substitutes. For this very reason, that of the misinterpretation, misunderstanding or misperception of behaviours, the most confusing situation for physicians of the time was to find themselves unable to distinguish whether the bodily signs were “real” or “fake”, which led to the omnipresent, skeptical suspicion of simulation:

Since hysteria makes evident the limits of precisely that medical discourse whose construction it is and at the same time points out the fundamental contradictions and indefinable phenomena of psychiatric nosology, it represents the ‘X’ that evades any system of classification. In this sense it marks a position that is not part of medical nosology’s claim of universality. (Bronfen 2000: 128)

In his *Graphic Ecstasy*, Georges Didi-Huberman gave an illustration of such deadlock in the attempt of decoding the bodily crisis relying on the wrong dictionary, or to

translate it without understanding the source language, a language which was actually under creation, or at least under profound revision:

The trouble-free practice of medicine would like to be founded on the prior assumption that symptoms never lie, and speak for the patient by uttering the truth concerning him or her, even when he or she is not thought to control, know or speak it. It will be understood why the hysterical symptom (which has at its core the duping of the patient - and of the other) has been able to function, in the words of Freud himself, as the “*bête noir*” of traditional medicine. (Didi-Huberman 2000: 305)

That ambiguity, intrinsic to the meanings of “hysterical” crisis, was well known to Freud as well, who once wrote that “it quite regularly happens that a single symptom corresponds to several meanings simultaneously. [...] In the course of years a symptom can change its meaning or its chief meaning, or the leading role can pass from one meaning to another” (1981, vol. 7: 53). Unfortunately, however, despite being able to acknowledge such a versatility, the only symbolic area Freud was seriously willing to take in consideration was the sexual one, as illustrated by the statement that: “a symptom signifies the representation - the realization of a phantasy with a sexual content, that is to say, it signifies a sexual situation” (1981, vol. 7: 47). Freudian sexual hermeneutical obsession was not limited to neuroses, nor was it either confined to psychology. Let us recall a humorous passage, found in the letters Freud exchanged with Ludwig Binswanger, precisely focused on the issue:

Freud expressed the opinion—not quite in earnest, though, it seemed to me—that philosophy was the most decent form of sublimation of repressed sexuality, nothing more. In response I put the question, “What then is science, particularly

psychoanalytic psychology?” Whereupon he, visibly a bit surprised, answered evasively: “At least psychology has a social purpose”. (Binswanger, in Fichtner & Pomerans 2003: 237)

The final checkmate in the medical understanding of hysteria, however, was represented by the problem that no doctor could provide an interpretation of the crisis able to overpower the agency of the “hysterical” subject engaged in an act of expression. This existential account also explains why “hysterics resist a cure by replacing one symptom with another whenever the doctor’s interpretation or analysis seems to lead to one”, as noted by Bronfen. “For Freud this persistent transformation of his patient’s hysterical symptoms meant the failure to find a final solution to hysteria” (2000: 131). Indeed, that shift and movement represents “the turning of the symptom into a metaphor” (Didi-Huberman 2000: 306); but a metaphor for what?

As seen above, it took a poet’s glance to see the truth. Thirty years later, critical psychiatrist Thomas Szasz, probably oblivious of Breton’s work, as quite possibly unaware of the researches of Marcel Mauss, attributed those same ideas to another colleague, when he wrote that: “in his later work, Sullivan (1956) has described hysteria as a form of communication and laid the ground for seeing it as a special type of game-playing behavior” (1974: 90). Under that sway, physician Thomas Szasz composed the first semiological theory of personal conduct which was attributing to “hysterical” behaviours the status of iconic signs of a protolanguage. According to that analogy, communication attempts, misunderstood by the mainstream medical gaze as symptoms of illness, were framing bodily signs under another class of meanings, different from both brain dysfunctions and Freudian sexual etiology. Szasz wrote that:

In general, whenever people feel unable—by means of “normal” mechanisms, such as ordinary speech—to prevail over the significant objects in their environment, they are likely to shift their pleas to the idiom of protolanguage (e.g., weeping, body signs). In other words, when one’s love object fails to “listen” to verbal complaints or requests, one will be compelled, or at least tempted, to take recourse in communicating by means of iconic body signs. We have come to speak of this general phenomenon, which may take a great variety of forms, as “mental illness.” As a result, instead of seeing that people are engaged in various types of communications set in diverse communicational (or social) situations, we construct—and then ourselves come to believe in—various types of mental illnesses, such as “hysteria,” “somatization reaction,” “hypochondriasis,” “schizophrenia,” and so forth. (1974: 130)

In 1976, also psychoanalyst Lucien Israël suggested to describe “hysteria as a form of communication, in other words to understand it as an attempt to set up a relation with the Other” (in Bronfen 2000: 129), an attempt which also includes the definition of the self as bonded to that Other, in this case by means of body language. In that sense, hysterical conversion, as Freud originally called it, “translates psychic traumata into somatic symptoms as an encoded message” (Bronfen 2000: 130). On that very threshold, where lived experience, one’s memory, the subject’s will, the need for communication and a social body get inextricably intertwined, we can consider behaviour as an exemplary illustration of the Lacanian action of *parlêtre*, literally *bespeak*:

It is in order not to lose this leap of meaning that I have now stated that we must maintain that man has a body, that is, that he speaks with his body, in other words that he *bespeaks* by nature. (Lacan 1987: 32)

Jacques Lacan went even further: in the same text he claimed that the notion of *parlêtre* was meant to replace the Freudian theory of the unconscious. Lacan was not alone in having considered the crucial bond between talking and existing as a core of psychological interest. The fundamental form of the Dasein, Heidegger wrote, was precisely the act of speaking: "Fully considered, speaking is: oneself speaking out in speaking with another about something. It is predominantly in speaking that man's being-in-the-world takes place. This was already known to Aristotle" (Heidegger 1992: 8). Here, the body takes its place in the world on the verge of the phenomenological liminality, covering semiology, psychology, medicine and philosophy under the seals of communication, agency, health and meaning. Instead of downplaying its explanatory power by reducing behaviour to an indicator of disease, the scientific outlook under its most brilliant interpreters came to consider meanings as the ultimate subject of this analysis, as human body represents precisely the medium of this sense-making, its symbol and its metaphor. Bodily signs come to represent a reference to a wider social organism and a cultural net of meanings, embodied in the living experience of the inter-subjective self as part of that world. As once stated by anthropologist Michael Taussig:

The signs and symptoms of disease do something more than signify the functioning of our bodies: they also signify critically sensitive and contradictory components of our culture and social relations. [...] In denying the human relations embodied in signs, symptoms, and therapy, we mystify those relations and also reproduce a political ideology in the guise of a science of physical things. (Taussig 1980: 3)

That materialist science of the physical things, that ideology and narrative, where scientific imaginary engaged with metaphors to produce a specific perception

of the feminine, an ontology of mental illness and a set of epistemological criteria to identify medical taxonomical kinds as representing objects of the world, was precisely the target of critical psychiatry. On top of that: “the belief that psychotic patients suffer from mental illnesses which are manifestations of brain pathology—whatever its scientific merit—is useful for psychiatrists who wish to deny their patients’ personal and social problems” (Szasz 1974: 94). In other words: deny their being-in-the-world and preclude “the scientific exploration of human existence and its specific modes of being” (Binswanger 1958: 193).

On the intercultural level, there have been psychiatrists inclined to consider the relevance of the social idiom of distress as an object of research. However, recent “ethnic turns” of psychiatry do not represent any real advance in theory. As noted by Aidan Seale-Feldman: “even when Western psychiatric diagnostic categories were critiqued as culturally constituted, they continued to serve as key reference points from which cultural variation was measured, as opposed to being treated as one among many equivalent ethno-psychiatries” (Seale-Feldman 2022: 4).

Let us now briefly proceed with a comparative cultural approach, hoping to bring forth some continuity on the semiology of behaviours by considering a series of variations of the phenomenon once called hysteria. Some ethnographic accounts may well come to enrich and further display the extension of this area of liminality, highlighting the relevance of *embodiment* and *agency* as defining some crucial paradigm shifters for both medicine and the social sciences. To be clear, by an agent we here mean an entity with deliberate and goal-directed behaviour, which we call agency.

In 1988, anthropologist Aihwa Ong published a much relevant research in cultural anthropology, describing how multinational corporations in Malaysian free-

trade zones had been seized by spirit attacks targeting young female factory workers.

Throughout the 1970s, free-trade zones were established to encourage investments by Japanese, American, and European corporations for setting up plants for offshore production. In seeking to cut costs further, these corporations sought young, unmarried women as a source of cheap and easily controlled labor. (1988: 29)

As she described, those women were usually coming from rural villages (*kampung*), where personal conduct was subject to a high normative pressure and women were “bound by customs regarding bodily comportment and spatial movements, which operate to keep them within the Malay social order” (1988: 31). A large scale incident took place in the 1970s in an American factory, involving 120 operators while they were engaged in assembly work, and causing the loss of 8,000 hours of production. Reports revealed that spirit possession was locally presented as the cause of the outbreak, displaying screams, trance states, fainting and violent behaviours. Singapore medical advisors from the Ministry of Labour quickly diagnosed the workers with “epidemic mass hysteria”, described as follows in their official reports:

Seizure cases were those who went into a violent struggle, swinging the upper limbs and kicking about. They would scream and cry, sweat a lot and breathe heavily. Their eyes were either opened and staring or closed. A rapid pulse of 100 per minute was common. A few went into a trance state. Each seizure may last from half an hour to more than two hours. (Chew et al. 1976: 10)

As an answer to the incident, “injections of chlorpromazine (25 mg.) or Valium (10 mg.) were given and the girls were sent home after they calmed down” (1976: 11). On

the medical report, we can further read that “It was significant that only the Malay girls were affected and none of the Chinese girls were affected. This may be due to the fact that such attacks could be culturally-related” (1976: 13).

In fact, ethnographic research in the local community and its social environment revealed that “spirit beliefs reflect everyday anxieties about the management of social relations in village society” and that “it is free spirits that are responsible for attacking people who unknowingly step out of the Malay social order” (Ong 1988: 31). Moreover, field research showed that “in Malay society, women are hedged in by conventions that keep them out of social roles and spaces dominated by men. [...] women’s spiritual, bodily, and social selves are especially offensive to sacred spaces, which they trespass at the risk of inviting spirit attacks” (1988: 31). Malay village women were exposed to such narrative on a daily base. Having been culturally accustomed to identify intolerable behaviours with the punishing actions of the spirits, the language of possession was the first, most obvious tool to embody and communicate the deep distress generated by a series of actions (production line, night shifts, male supervisors, Western toilets, etc.) that local women were not supposed to perform at all, according to local normative social prescriptions. The spirit body language, or protolanguage, would there define the culturally acquired manner to enlive and express both discomfort and the impossibility to cope with distress, as well as to simultaneously perform an act of resistance and rebellion by assuming the role of victims, “who were viewed as not responsible for their affliction” (1988: 39) and therefore could not be punished or fired as a consequence. Moreover, the very perception of such environments and transgressive tasks was culturally codified by women in terms of spirit presence and danger. Western-based medicine, ignoring those cultural modes of being-in-the-world, simply did not take in consideration the existential ground of embodied local meanings. Beyond conversion and somatization, which still indicate the presence of an undetectable mental illness, or a *petitio principii* around a mental malfunction, the analytical tools of embodiment, agency and crisis of subjectivity provide as many accurate scientific tools to account for the

relations between human beings, their health and their environment.

Shifting now the focus back to Europe, a relevant pattern can be revealed by the comparison of such ethnographical materials with Western “hysterical” crisis. Following Bronfen, among others, we deduce that the meaning of such crisis was directly related with the power structures typical of Victorian society, the social environment in which women were living and operating: “the message” she writes, “also touches on the symbolic fictions of authority and consistency. [...] Through her exaggerated display of fragility, the hysterical subject forces those persons [...] to ask themselves what it means to be in an apparent position of authority and power” (2000: 131). Under the existential analysis, those crisis may well represent the search for an agency which has not yet found its way through, a specific being-in-the-world caught in the moment of its deep disquiet:

Dasein as being-in-the-world means: being in the world in such a way that this Being means: dealing with the world; tarrying alongside it in the manner of performing, effecting and completing, but also contemplating, interrogating, and determining by way of contemplation and comparison. Being-in-the-world is characterized as concern. (Heidegger 1992: 7)

Reconsidering then the very origins of psychoanalysis, which are inextricably related to the invention of hysteria, let us briefly recall Freud’s first major case history: the case of Dora, nickname for Ida Bauer. Drawing on such a parallel may help us establish connections around the semiology of behaviours. Under the influence of feminist theory (see Rose 2020, Cixous & Clément 1986, Moi 1981) we can see that the social relations defining the existential being-in-the-world of the patient have been clearly set within a hypocrite, perverse, male dominated milieu where the female

protagonist was suffocating under heavy personal freedom restrictions, very demanding norms and omnipresent judgment:

Freud's case history reveals much about the situation of a young woman from the Viennese bourgeoisie at the turn of the century. Dora's psychological problems can easily be linked to her social background. She has very little, if any, scope for independent activity, is strictly guarded by her family, and feels under considerable pressure from her father. (Moi 1981: 60)

In Toril Moi's philosophical account about the Freudian *Fragment of an Analysis of a Case of Hysteria* (1905) we are reminded that Dora entered therapy in 1900, at the age of eighteen, when "her parents found a suicide note from her", and as a consequence "Dora's father sent her to Freud for treatment" (Moi 1981: 60). According to Freud, her "most troublesome symptom", coincidentally, "at all events in the last few years, used to be a complete loss of voice" (1981, vol. 7: 22). Dora lived with her parents, said to be married without love, and who had a very intimate friendship with another couple: Herr and Frau K. During the eleven weeks of therapy, the family situation displays a very dysfunctional set of relations: when Dora was fourteen, her father's friend made her a sexual advance. When she told her father, he just would not believe her, openly standing on the side of his friend, and even considering together with him alternative theories to explain the girl's unrealistic claims. Later, Dora also discovered that her father was sleeping with the friend's wife, under the silent complicity of her mother, who was too terrified at the idea of losing her husband to react. Freud in fact agreed with the idea that Dora's father "did not wish to look too closely into Herr K.'s behaviour to his daughter, for fear of being disturbed in his own love-affair with Frau K." (Freud 1981, vol. 7: 36). As observed by Moi:

The father wants to exchange Dora for Frau K. ('if I get your wife, you get my daughter'), so as to be able to carry on his affair with Frau K. undisturbed. Dora claims that her father only sent her to psychiatric treatment because he hoped that she would be 'cured' into giving up her opposition to her father's affair with Frau K., accept her role as a victim of the male power game and take Herr K. as her lover. (Moi 1981: 60)

At the same time, Dora got to know that the father's friend had made violent sex with the children's governess, who later resigned and went away. During the analysis, little of those elements were considered as really crucial by Freud, whose conception of the feminine and its representations, it has been observed, may constitute a structural dialectical limit to psychoanalysis as a whole (on this, see Rose 2020).

The analysis in fact coincided with the protracted, exhausting attempts on the part of Freud to manipulate and convince his patient to accept his own explanation for her distress: namely deducing that, according to the indispensable cliché, Dora would suffer from a repressed sexual attraction for her father. Next to that, the doctor's diagnosis was enriched by observing an additional repressed sexual attraction towards the father's friend, Herr K., who once tried to abuse her. As Dora did not accept to conform to the representation of her feelings according to such theory, Freud got more and more frustrated. Receiving Dora's refusals, he wrote that "my expectations were by no means disappointed when this explanation of mine was met by Dora with a most emphatic negative" (1981, vol. 7: 58). However, regardless of the open denial from the patient, Freud kept on proving his own opinion and decided to simply ignore her words to preserve his theoretical model. Conveniently, Freud wrote that: "If this 'No', instead of being regarded as the expression of an impartial judgement [...] is ignored, and if work is continued, the first evidence soon begins to appear that in such a case 'No' signifies the desired 'Yes'" (1981, vol. 7: 60-61).

In the therapist's model for the patient's mind, Dora also identified herself

with her mother, being thus jealous of her father, as well as with the friend's wife, secretly desiring to have a sexual encounter with her husband — whom she had already had to push away with a slap. Cherry on top: according to the analyst, her concerns with her father's mistress were feelings "which could only be based upon an affection on Dora's part for one of her own sex", suggesting an underlying homosexuality in light of the poor evidence that Freud had "never yet come through a single psycho-analysis of a man or a woman without having to take into account a very considerable current of homosexuality" (1981, vol. 7: 60). Interestingly, though, that same kind of attraction, just projected on the male side, he regarded as "the perversion which is the most repellent to us, the sensual love of a man for a man" (Freud 1981, vol. 7: 50). Arguably, chances are it is not only Freud's ideas about the feminine that might come to invalidate psychoanalysis as a whole. Blinded by "what Flaubert calls *la rage de vouloir conclure*" (Binswanger 1958: 192), Freud just could not see that:

when the hysteric shows her own infirmity [...] her ingenious symptoms spring from the fantasy that happiness is possible, e.g. reliable and intact family bonds, a protective home in the world, omniscient figures of authority, universally valid cultural laws. But precisely the inadequacy of reality causes her to incessantly question paternal law and its cultural attributes and to stare [...] the present state is not one of happiness. Thus [...] she formulates her criticism precisely with reference to the laws she is also questioning. (Bronfen 2000: 132)

As seen, the silencing of Dora within her family was restaged in therapy. The currency of her words had no exchange value in the economy of that speech: her voice was wastepaper, not recognized by the financial authorities in charge. Proving the feminists right, instead of guessing that the loss of voice of Dora (the meaning of such dysfunction) could be a sign of her lack of agency within her social milieu,

Freud quickly gets to conclude that:

it is not to be wondered at that this hysterical girl of nearly nineteen, who had heard of the occurrence of such a method of sexual intercourse (sucking at the male organ), should have developed an unconscious phantasy of this sort and should have given it expression by an irritation in her throat and by coughing. (1981, vol. 7: 51)

The misunderstanding was so profound that Dora soon decided to interrupt the therapy, just at the end of the year, leaving Freud to deal with what he considered a therapeutic fiasco. As argued by Janet Malcolm, Freud treated Dora “as a deadly adversary. He sparred with her, laid traps for her, pushed her into corners, bombarded her with interpretations, gave no quarter, was as unspeakable, in his way, as any of the people in her sinister family circle, went too far, and finally drove her away” (1981: 97). Unwilling to acknowledge that Dora could not identify with those alleged repressed sexual impulses (Freud’s theoretical constructs), he rather entrenched himself in some solipsistic distortion of the clinical reality.

In his writings, thus he describes his personal, dramatic take on that interruption: “because of the unknown quantity in me which reminded Dora of Herr K., she took her revenge on me as she wanted to take her revenge on him, and deserted me as she believed herself to have been deceived and deserted by him” (1981, vol. 7: 119).

By no means could the misunderstanding be more irremediable than that. Finally, it is mentioned in his postscript that, after the interruption of the therapy, Dora visited those family friends again and eventually managed to openly, verbally speak the unspoken truth to them:

she brought her own business to a satisfactory conclusion. To the wife she said: “I know you have an affair with my father”; and the other did not deny it. From the husband she drew an admission of the scene by the lake which he had disputed, and brought the news of her vindication home to her father. Since then she had not resumed her relations with the family. After this she had gone on quite well till the middle of October, when she had had another attack of aphonia which had lasted for six weeks. (Freud 1981, vol. 7: 121)

This last crisis found definitive resolution after six weeks, when Dora finally found a man she fell in love with, got married and left her father’s house for good.

Leaving aside Freudian metapsychological assumptions, together with his numerous biases, we can observe that where he saw a silly revenge on the part of Dora, we may recognise instead a young woman progressively conquering a space of existence (a space of expression), a public voice, a “being there” independent from the dominating figures surrounding her, including that of Freud—the therapist chosen by her father to fix her. Just like the Malay factory workers mentioned above, dysfunctional behaviours once collected under the word “hysteria”, and now relabeled as somatic symptom, conversion and dissociation disorders, may be more fruitfully considered as acts of resistance (Ong 1988), as “crisis of the presence” (De Martino 1961), or “crisis of subjectivity” (Northoff et al. 2023), a mode of *parlêtre* on the verge, a quest for agency. This threshold may be located on the side of Heidegger’s genuine alternative to both the body-soul conception and the straightforward identification of human beings with their physical bodies, hormones, and brain cells, an approach undertaken by contemporary materialists.

Going back to the writings of psychiatrists Jacques Lacan, one may observe that the psychological dynamic towards liberation involves both the release from a

current environment of oppression, and the inner representations still seeking for the approval of the Master (see Seminar XVII: *The Other Side of Psychoanalysis*). That journey, that quest has been amiably described by Slovenian philosopher Slavoj Žižek as follows:

the final moment of the psychoanalytic process is, for the analysand, precisely when [...] he accepts his being “as non-justified by the big other”. This is why psychoanalysis began with the interpretation of hysterical symptoms, why its “native soil” was the experience of female hysteria: in the last resort, [...] what is the hysterical question if not an articulation of the incapacity of the subject to fulfill the symbolic identification to assume fully and without restraint the symbolic mandate? Lacan formulates the hysterical question as a certain “why am I what you’re telling me that I am?”. [...] The hysterical question opens the gap of what is “in the subject more than the subject,” of the “object in subject” which resists interpellation - subordination of the subject, its inclusion in the symbolic network. (2000: 147)

So contrary to Quine’s materialism, according to which “the explanatory value of special and irreducible intermediary entities called meanings is surely illusory” (1953: 12), we argue that such entities may be rather crucial for the understanding of dysfunctional behaviours in psychology and psychiatry. Malay spirit possession cases can be considered as an embodied protolanguage of resistance insofar as the meaning of such behaviours corresponded to, or resonated with, culturally codified modes of being-in-the-world, together with the feeling that crucial norms, structuring the meaning and the value of human beings in such world, were being transgressed. Furthermore, they reflected the lack of agency within a system of powers upon which the workers had no active, defining role, nor right of expression. On the same page, the meaning of the semiparalysis presented by Pierre Janet’s Marie (1889) was

directly connected with the embodied memory of the contact on her left cheek, but were also situated in a context of weakness where she had been forced to sleep next to the sick child, without having a voice in the matter. As seen above, Dora recovered from her crisis when she managed to take her voice back (her life back), bringing it into the social arena and then leaving from an abusive environment. The concept of agency, together with the ones of embodiment and crisis of subjectivity, then represent an accurate, coherent and relevant resource in existential analysis, or daseinanalysis. Their characteristic liminality provides psychological and psychiatric evaluation with a socially grounded theoretical construct and suggests fruitful therapeutic orientations, additionally bridging the body-mind gap instead of taking sides within it.

Existential analysis further places itself on the level of “ontic statements—that is, statements of factual findings about actually appearing forms and configurations of existence” (Binswanger 1958: 192), independent from unobservable, inferred metapsychological construct ascribing stable properties or functions to the subjects:

The subject is always attached, pinned, to a signifier which represents him for the other, and through this pinning he is loaded with a symbolic mandate, he is given a place in the intersubjective network of symbolic relations. The point is that this mandate is ultimately always arbitrary: since its nature is performative, it cannot be accounted for by reference to the “real” properties of the subject. (Žižek 2000: 146-7)

By way of conclusion, let us just highlight that such rich existential dynamic is not enough represented by the “psychosomatic turn”. In fact, if current nosological categories of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) do represent the improvement of eliminating an unbearable gender bias, and a more

subtle philological one (see King, in Gilman et al. 1993), they still present most of the ontological and epistemological shortcomings of their predecessor hysteria. Additionally, they increased diagnostical uncertainty. The current category of conversion is nothing else but Freud's direct descendent of "hysterical conversion", only deprived of the adjective, and is largely overlapping with somatization. Dissociation, a concept created and soon dropped by Janet, was initially defined as a mere mental state, then it has been taken as a symptom of a disease, finally it came to designate a disease by itself, revealing much epistemological confusion on the part of the editorial board.

The "psychosomatic approach" has led neither to better therapies for patients nor to clearer theoretical insights for investigators. The challenge of the Cartesian dichotomy was not met. It was sidestepped. And so it is still with us, but now it is even more difficult to recognize and root out than it was three decades ago, when modern psychosomatic medicine began. (Szasz 1974: 104)

Beyond psychiatric nosological kinds, the consideration of behaviour as a system of social symbols, a performative communication act and the arena of negotiation of meanings, opens a wider framework, one where it is possible to ask questions about the existential condition of human beings faced with a subjectivity crisis. Where materialist accounts fail to provide a model able to describe the mechanism governing the translation from the psychical experience to the somatic outcome, so do psychoanalytical models, where no evidence can possibly inform us about what theoretical construct (Freud, Janet, Jung, Adler, Lacan, Ferenczi, Klein, etc.) could actually correspond to our inner life. Instead of following Popper, who described such hermeneutics as pseudosciences by the falsificationist argument (1962: 34–35), we believe that precisely by standing on such thresholds between disciplines, constructs and theories it is possible to describe the meaning of human

behaviours in those areas of coexistence, overlapping and coherence. This meaning-oriented approach may emphasize possibility, intersection and process evaluation over side-taking and definitive pathologizing typologies.

THIRD THRESHOLD⁹

METAPHORS IN THE CLINICAL GAZE. TRAUMA, MEMORY, UNCONSCIOUS, AND

HYSTERIA

RESUME

The final threshold we aim to explore is the interconnection between metaphors and scientific knowledge. Building upon writings of William James, Jacques Lacan and Sigmund Freud, among others, we here aim to consider the role of metaphors in some key ideas of psychological theory, as to show to what extent epistemic heterogeneity characterizes scientific inquiry more broadly. Such heterogeneity, sometimes unawares taken on board in scientific research, may include not only metaphysical assumptions and social constructions, but also the extensive adoption of metaphors as means to validate theories, guide inquiries and help imagine new possible paths for future research. We hereby discuss some of the metaphors that have been deployed in the history of psychoanalysis to validate scientific statements around hysteria, on the liminal area between philosophy and science. The concepts of trauma, memory and unconscious are taken into account as bridging empiricism and the theory of meaning. Following the general orientation outlined by Lakoff & Johnson, Danziger and Reynolds, we investigate how the validity conditions of scientific statements are deeply embedded with the truth of the metaphors and analogies adopted to formulate their model-based reasoning.

⁹ The content of this paragraph is currently in press as *Metaphors in the Clinical Gaze. Trauma, Memory, and Unconscious*, in «Orbis Idearum», Vol. 14, No. 1, Summer 2026.

*In a culture where the myth of objectivism is very much alive
and truth is always absolute truth,
the people who get to impose their metaphors on the culture
get to define what we consider to be true — absolutely and objectively true.*
(Lakoff & Johnson 1980: 161)

In 1533, in a letter to the Clergy of the province of York, King Henry VIII wrote this much fascinating passage:

He that [should] say he rode beyond the sea, were not conveniently interrupted in his tale by him that would object sayling upon the sea, where he could not ride at all; and rather then men would note a lye, when they know what is meant, they would sooner by allegory or metaphor draw the word to the truth, then by cavillation of the word note a lye. [...] The truth cannot be changed by words. (in Haddan 1869: 385)

Henry VIII, King of England and Ireland, here prettily describes metaphor and allegory as forces able to “draw the word to the truth”, and truth itself as something that “cannot be changed by words”. A century and a half later, in 1691, the Canon of Windsor, John Hartcliffe, redacted an ambitious *Compleat Treatise of Moral and Intellectual Virtues*, aiming to describe their nature and thus prove their usefulness. There, metaphors and allegories are said to have quite a different relation with knowledge and truth:

let not Men think they can be Holy without Moral Vertue; [...] Devout and Pious, without all sober and sincere use of their Understandings in spiritual Matters, for this Mischief will certainly ensue upon it, that Men will embrace Metaphors and Allegories, Fancies and Forms of Speech, instead of the Substance of true and real Righteousness. (Hartcliffe 1722: 284)

Suspicion against trust, the Canon and the King look at metaphors with very different eyes. One of those writings depicts metaphors and allegories as friendly advisers of the truth; the other, as impediments, or derails, against its achievement. Metaphor itself, on its part, could rather be considered as somewhat of a neutral ambassador, a mere carrier, as the Greek verb μεταφέρω derives from meta (meaning “over”) and pherein (“to carry”). Metaphoric thought brings us over, it allows us to make connections, among others, between concepts and experiences, words and ideas. The debate around the relations between analogies and truth, which may today be considered as a part of the wider Foucauldian discussion around words and things (*Les Mots et les Choses*, 1966), has soon reached scientific reasoning and the philosophy of science as well, as nature does not come with its own language and we as human beings are not sure whether or not our thoughts and languages can actually represent or correspond to what we call the natural world. Nonetheless, chances are that metaphors might be inextricably connected with the very way we think.

Though the use of metaphorical language in science has been historically criticized by some philosophers of science and scientists on the grounds that metaphors are figurative, ambiguous, and imprecise, their generative potential cannot be ignored. It is, in fact, metaphor that makes theory possible, and a great number of scientific revolutions have been initiated through novel comparisons between natural phenomena and everyday experiences. (Taylor & Dewsbury 2018: 2)

Besides that, Taylor & Dewsbury reminded that the choice of a specific metaphor, or a set of them, may have an impact that goes well beyond scientific theory itself:

A growing body of literature also suggests that metaphors shape the mind, structure our experiences, and influence behavior. Experimental studies reveal that changes in the framing of policy-relevant issues (such as crime, natural disasters, and climate change) through metaphors can subtly, and covertly, influence the perception of risk, the sense of urgency, and the level of support for proposed

“solutions” by acting on pre-existing cognitive schemas and prompting affective responses. (Taylor & Dewsbury 2018: 1)

On the sway of such debate, we would like to consider here some of the metaphors and analogies that have been placed at the heart of the medical approach to the psyche, or mind, as well as to further discuss their validity in terms of truth attributions and their general function within the scientific narrative as producers of discursivity. To do so, we will refer to the very beginnings of psychoanalysis and dynamic psychology, along the XX century, when concepts like dissociation, subconscious, conversion, unconscious, somatization, and more, have been created to account for the clinical phenomena that ended up constituting the nosological category of hysteria.

In order to play a functional role under the clinical gaze on hysteria, the most diverse entities of memory, trauma, the unconscious and behaviour have been subject to metaphorical readjustments, particularly along the XIX and XX centuries. More precisely, the metaphorical and analogical relations between those entities under the scientific outlook came to significantly alter their status, their respective place within a model of understanding and their very meaning for the time to come.

As a start, let us consider the particular journey of the word “trauma”, which has been responsible for transposing sets of meanings and properties belonging to medicine from materialist reductionism to the area of metaphysics. We would consider that a crucial idea, according to which dysfunctional behaviours can be brought back to an original psychological experience (*psychogenesis*), has precisely been depending on a metaphor: the metaphor of psychological trauma. The idea that psychological traumas are real entities is today taken for granted, both in the scientific and in the popular domains. Etymology suggests that the word “trauma” is derived from the Latin “traumaticus” and the Greek “τραυματικός”, literally meaning “pertaining to a wound”, where the word “τραῦμα” designated precisely the “wound, or external bodily injury in general; also the condition caused by this; traumatism” (OED). Initially meant to describe an external, physical injury of the body hitting against an object, the meaning of the word trauma has only recently, under Freud, Breuer and

Janet, expanded its semantic spectrum to include an internal, abstract, emotional kind of experience conceived as a “harm”. The general metaphor underlying this extension of meaning could be phrased as: “some experiences are wounds”, or “some thoughts are injuries”, with an extremely significant shift of domains from physical matter to human feelings. If we extend the symbolic system of meanings surrounding such conception, we can observe how such metaphors work together with another metaphorical pair, this time spatial in nature: the statements “body is exterior”, “mind is internal”, which leads us to attribute physical, dimensional, orientational properties to our ideas, memories or feelings. From the rhetorical device of a simile (some experiences act in memory as wounds act on the body), a shortcut produced the metaphoric statement “some experiences are wounds”. Through such metaphors, which may appear to be more conventional than true, psychological distress has gradually been equated to physical pain, emotional experiences to body collisions, bad memories have been equated to physical wounds, metaphorically allowing for the formulation of true statements in the clinical research at the very beginning of psychoanalysis and dynamic psychology.

This pivotal figure, that of psychological trauma, was first introduced by Breuer and Freud in 1893, and soon after echoed by philosopher William James — the first teacher to offer a psychology course in the US — in the volumes of the American journal «Psychological Review», as we shall see.

Following the pages of *On the Psychical Mechanism of Hysterical Phenomena* (a title that itself includes a metaphor from physics) Freud and Breuer collected some theoretical premises, where they observed:

The experiences which released the original affect, the excitation of which was then converted into a somatic phenomenon, are described by us as *psychical traumas*, and the pathological manifestation arising in this way, as *hysterical symptoms of traumatic origin*. (1981, Vol. 2: 209 [1893])

Still aware of the embryonic, metaphorical status of that expression, in the following year William James published a brief review dedicated to the colleagues’ work. He

there traced the figure of speech back to the original research on memory by Pierre Janet, often neglected by Freud, who nonetheless was reading him very closely. Janet was in fact the first psychologist to systematically study psychological trauma and to describe dissociation as the primary mechanism through which overwhelming experiences lead to psychopathology. James resumed the theory as follows:

Hysteria for them [Breuer & Freud] starts always from a shock, and is a 'disease of the memory'. Certain reminiscences of the shock fall into the subliminal consciousness, where they can only be discovered in 'hypnoid' states. If left there, they act as permanent 'psychic *traumata*', thorns in the spirit, so to speak. (1894: 199)

The adoption of italics in the texts pertains to the originals and is particularly relevant here. In fact, as by now, in contemporary society, we hardly ever employ the word "trauma" to describe a physical injury out of a hospital, this expression has been gradually undertaking a process of resemantization, coming to exclusively designate a psychological kind of event. In other words, it has increasingly become a dead metaphor for the popular domain, losing its original meaning while being progressively detoured towards a new referent.

Such journey of the meaning by analogies and predication, considered under the light of empiricism and objectivity, begs the questions: doesn't the metaphorical status of such statements and theories foreclose their possibility of conveying a scientific truth? How exactly are metaphors different from scientific models? And in a particular epistemic framework, how are they related to invention or discovery? Before we discuss such questions, let us consider some further instances.

In the history of psychology, trauma has not been the only concept to be metaphorically assigned to the transference of systems of meanings from one domain to another. Memory as well has been variously associated to a series of analogical relations, inaugurating alternative sets of conventions and various outlooks on reality. It is not our ambition here to draw, or even outline, a comprehensive history of the metaphors of

memory, as such a task would require a dedicated research on its own, possibly exceeding our abilities. For the reader who may be interested in such journey, we refer to the fascinating work of Douwe Draaisma: *Metaphors of Memory: A History of Ideas about the Mind* (1995). What we take on us here, before we pass on to the unconscious, is simply the brief appreciation of the cognitive, knowledge potential that metaphorical and analogical thought comes with when it intertwines with the idea of memory. In the XIX and XX century, when dynamic psychology and psychoanalysis were brewing, several conceptions of memory had already been proposed to help think about its nature.

In ancient times, Plato famously compared human memory to a “wax block” in his dialogue *Theaetetus*, describing it as a gift of Mnemosyne (the Titan mother of the Muses) located within the soul. He proposed that when we perceive or think about something, we imprint experiences onto this internal wax block, using the impressions of seal rings. Whatever is imprinted is remembered, while what cannot be imprinted, or is rubbed out, is forgotten. This metaphor suggested that the quality of one’s memory depends on the nature of the wax. Likewise, Aristotle utilized his master’s wax block (or wax tablet) as a primary metaphor to explain memory and perception, describing it in his works *De Anima* and *On Memory and Reminiscence*. He there argued that sense perception acts like a signet ring, pressing into soft wax, leaving a permanent impression or memory trace (an engram) in the soul’s bodily seat, which persists until it is overwritten, or until it fades. This model served as a physiological explanation for how external objects imprint forms onto the mind without transferring matter, distinguishing his view from Plato’s more complex theories involving immortal souls and pre-existing knowledge. While Plato regarded memory as an imprint in the immortal soul, Aristoteles considered memory as a modification in the mortal soul, imprinted like a cast at birth time (see Engelhardt & Levy 2023). But even more figures had been advanced by Plato:

The ‘aviary metaphor’ was proposed (also in *Theaetetus*) as an alternative to the former. There, birds are captured and gathered in an ‘aviary’ (birdcage), each representing different kinds of knowledge [memories]. The aviary is empty [blank] in the newborn, and any bird that is captured and encaged corresponds to a learned topic [knowledge] [memory] (Engelhardt & Levy 2023: 2)

In the *Philebus*, Plato's Socrates describes memory not as a physical inscription but as the preservation of perceptual awareness (*sōtēria* of *aisthēsis*) within the soul (See Harte 2014). Socrates there compares the soul, in which memories are recorded, to a book that contains true and false reports, recorded by a writer and illustrated by a painter. Those recordings would trigger hopes and fears, pleasant and unpleasant feelings in the soul that views them. That internal "book" allows the soul to compare current perceptions with stored memories, forming the basis for opinions and judgments. Socrates further argues that because these internal recordings can be erroneous (as the writer can draft something false), they can generate false pleasures and illusions, distinguishing the soul's intellectual capacity from mere bodily sensation.

Much later, Descartes brought the body more heavily into the equation, and provided a new idea, defining memory as a trace, or pattern, left in the brain by past sensations. He distinguished between bodily memories (stored in the brain's physical traces) and intellectual memory, which depended solely on the soul. Finally, Richard Semon postulated concepts and terms centralized by the "engram" concept, and accompanied by "engraphy" (encoding) and "ecphory" (recall) (see Schacter et al. 1978). Each new proposal, each new analogy, emphasized different features that could be adopted to think about memory, reshaping its look and reconsidering its functions.

In the XX century, under the medical surveys on the hypnotic state, memory has been associated with the idea of a set of perceptual data, well stored from childhood and available for recollection, based on a metaphor that could be phrased as "memory is an archive". In those same years, the development of psychotherapy as a talking cure enabled Pierre Janet as much as Sigmund Freud to operate in the delicate realm of memory editing, providing evidence that the metaphor "memory is a storytelling" could also deliver relevant clues, and indicate otherwise unimagined research outlines to be developed (see Hacking 1995).

We were mentioning that, according to Janet, "unintegrated memories" manifest as fragmentary reliving experiences, including somatic sensations, visual images, and behavioral reenactments, summerized under psychological traumas. Janet acutely identified fixed ideas as complexes resulting from failed adaptation, which disrupt

effective action and lead to conditions he categorized as hysteria or, as he actually called it, *psychasthenia*. Interesting detail: the treatment, there, was only possible because memory was considered as an entity that could be “cured”, an idea first introduced by Philippe Pinel at the end of the 1700. The idea that lost reason could be restored, instead of being lost once and for all, was back then an absolute innovation, which inaugurated the use of medical knowledge and treatment in respect of the “madmen”, who gradually became patients. In Janet, as well as in Freud, memory became the very object of such therapy, considered as an entity that could get sick, and therefore could be cured.

There is more. Philosophers like Edmund Husserl and Maurice Merleau-Ponty seemed to further justify another early Greek intuition, that can be metaphorically stated as “memory is imagination”, or “memory is fantasy”. In the clinic, Freud himself (1981, vol. 16: 386) pointed out that traumatic memories were often nothing more than pure fantasies, acting nonetheless as experienced events in the patient’s life and body.

What we wish to highlight, with this brief historical overview on the ideas of memory, is that by connecting apparently unrelated domains, each of those metaphors and analogies revealed a particular net of meanings and relations, a new possible morphology for the entity described, and several opportunities for further interactions with other entities and disciplines. An archive is typically an available register of information, ready for consultation. It may contain images, sounds, words, bodily feelings, emotions, affections; but it is also a “read only” kind of device. A wax block, on the contrary, is not something stable, but it can progressively be carved, it can be molded, melted down and remarked again from scratch. In a similar way, a text allows for modification, being subject to writings and rewritings, not so much a printed book. Even more interestingly, a statement in the form of text can be false, negative, illogical, paradoxical, or just wrong, as suggested by Socrates in the *Philebus*. Its underlying logical structure allows for contradictions or forbids them in a way iconic images can not. By further considering memory as a mode of fantasy (see Husserl 2005), the connection between inner life and external experience in the social or material world is loosened up to the point that it does not deserve much attention anymore, providing the psychic subject with full sovereign power over her or his rememberings, in the open

domain of pure imagination. Such panic autonomy is however somehow challenged by the metaphor according to which memory is a storytelling. As reported by Janet (1913; 1889), psychotherapy and talking cure give rise to a co-working relation between therapist and patient around traumatic memories, creating peculiar narrations where both the therapist and the patient are equally assuming the role of authors of the memorial storytelling, fostering new, shared interpretations of experiences. Together, they are changing their meanings.

The couples memory-archive, memory-text, memory-wax block, memory-image, memory-story, and memory-fantasy, inaugurate as many opportunities for the creation of theoretical models about the entity of memory. Our digression aims to elucidate the much stimulating idea that every metaphor employed in the understanding of an entity may inaugurate a new set of affairs, novel meanings to be explored and new possibilities for research around a certain subject, in this case memory.

Next to the metaphorical shifts of trauma and memory, and in some way together with them, the concept of the unconscious represents no exception in the history of psychology. In fact, all three ideas have been deeply and reciprocally reframed under the medical theorization of hysteria, right at the turn of the XX century.

The first known use of the word “unconscious”, initially used as an adjective, appears in Thomas Hobbes’ *De Mirabilibus Pecci*, in 1678 (“*unconscious of its fault which tortur’d cries*”), where it meant “unaware” or “not marked by conscious thought” (OED). English poet Samuel Taylor Coleridge later adopted it in his 1817 *Biographia Literaria*, where he wrote: “conscious or unconscious, the freewill, our only absolute self, is co-extensive and co-present” (2014: 82).

In 1800, Schelling’s *System of Transcendental Idealism*, whom Coleridge read passionately, for the first time mentioned *das Unbewusste* [the unconscious] as a substantive, “which indicates that the concept ‘the unconscious’ was established in Germany in the last quarter of the 18th century” (Otabe 2019: 96). Later, in *On the Origin of Species* (1859), also Charles Darwin used it as an adjective, to refer to the “unconscious selection” processes in nature (see Bargh & Morsella 2008). From the 1860s, the writings of Wilhelm Wundt and Charles S. Peirce present the concept of

“unconscious inference”, which came to incorporate the latter’s broader theory of knowledge. Wundt even described as a fact the continuity of consciousness and the unconscious, suggesting that “it is never possible to establish a clear-cut boundary between consciousness and unconscious” (in Cristalli 2020: 437).

While the term was employed in general English for over a century, its current psychological sense, and its proper thematization, was developed later, precisely through the theories of Janet and Freud, although recent studies “agree that it was in *Philosophical Aphorisms* (1776) by Ernst Platner, German anthropologist and physician, that the concept of ‘the unconscious’ first appeared” (Otabe 2019: 95).

Prior to Freud, philosopher Eduard von Hartmann popularized the concept with his 1869 work *The Philosophy of the Unconscious*, while Janet initially used “subconscious” to describe a mental state inaccessible to introspection. In *L’Automatisme Psychologique*, he defined the subconscious not as a separate entity, but as an act which kept an inferior form amidst others of a higher level, resulting from a narrowing of the “field of consciousness”. An action there, not an entity.

In his seminal 1890 work *The Principles of Psychology*, William James examined how psychologists and other experts had used the term unconscious, drawing precisely on XIX century writings by figures like Arthur Schopenhauer, von Hartmann and Janet. The early, uncertain physiognomy of such concept, still under debate and definition, can be fully appreciated through the analysis of the metaphors and analogies that Freud himself put in place to help outline and establish his theory.

In his 1915 *Papers on Metapsychology*, Freud allowed himself to play with a general metaphor that can be phrased as “the unconscious is a place”, or “the unconscious is a space”, giving raise to a theory of the topography of what Freud called the mental acts (another metaphor). That figure would involve the possibility to describe ideas, feelings and memories as entities subject to the coordinates of a dimensional space (up-down, in-out, depth-surface, front-back, etc.), as well as to imagine thoughts and memories as units that can be moved, located, extracted or displaced. Freud soon realized that such metaphoric treatment would have required the ability to even design a

map of the unconscious:

If we are to take the topography of mental acts seriously we must direct our interest to a doubt which arises at this point. When a psychical act [...] is transposed from the system Ucs.¹⁰ into the system Cs. (or Pcs.), are we to suppose that this transposition involves a fresh record — as it were, a second registration — of the idea in question, which may thus be situated as well in a fresh psychical locality, and alongside of which the original unconscious registration continues to exist? Or are we rather to believe that the transposition consists in a change in the state of the idea, a change involving the same material and occurring in the same locality? This question may appear abstruse, but it must be raised if we wish to form a more definite conception of psychical topography, of the dimension of depth in the mind. (1981, vol 14: 173-4 [1915])

The metaphoric model of Freud was not alone in defining horizons capable of providing ways to conceive the unconscious. Moving to a quite different ontological register, and towards another, radically distinct set of rules and opportunities, French psychiatrist Jacques Lacan later proposed a powerful alternative idea. The Lacanian, Saussurian-based analogy of the unconscious as a language (“the unconscious is structured like a language”), was first outlined in the 1953 text *The Function and Field of Speech and Language in Psychoanalysis*. Such vision originates a whole different ecosystem of reasoning. Under such an analogy, human thoughts and feelings become something alike representations of an acoustic image, associated with a concept and further subject to the rules of natural languages. Such a representation of the unconscious allowed, inter alia, for the consideration of human behaviours as forms of communication. A few years before Thomas Szasz, and some thirty years after the intuition of André Breton (1928), Lacan suggested the fertility of considering the correspondence between behaviours and language. Thus he wrote in *The Formations of the Unconscious* (Seminar V, 1957-1958), dealing specifically with hysteria:

¹⁰ [Ucs: unconscious / Cs: conscious / Pcs: preconscious]

Obsessional or hysterical behaviour is overall structured like a language. What does that mean? It isn't enough to say that beyond articulated language, beyond discourse, all of a subject's acts would have this sort of equivalence to language that is there in what is called 'un geste', gesture, inasmuch as a gesture is not simply a welldefined movement, but is also actually a signifier. The expression that fits perfectly is 'une geste', a gest in the sense of a 'chanson de geste', a gest such as The Song of Roland — that is, the sum of one's history. It's ultimately speech, if you will. The sum of the neurotic's behaviour presents itself like speech, and even like full speech, in the sense in which we saw its original mode in the engagement in the form of a discourse. It's full, but entirely cryptographic speech, unknown to the subject as to its sense, even though he pronounces it with all his being, in everything he manifests, everything he evokes and has ineluctably realized down a certain path of completion and incompletion, if nothing in this order of oscillation called analysis intervenes. It's speech pronounced by the barred subject, barred to himself, which we call the unconscious. (Lacan 2017: 450)

In 1977, psychiatrist and anthropologist Arthur Kleinman as well argued that physical symptoms are to be considered as metaphors through which individual and collective distress could be voiced. Szasz too had claimed that hysterical behaviours were a form of communication, but by denying the entity of mental illness, he could not consider them as symptoms. As seen above, in the previous chapters, Szasz proposed the distinction between “real” illnesses and “metaphoric” illnesses. Let us quote him again:

My claim [...] rests on the materialist-scientific definition of illness as a pathological alteration of cells, tissues, and organs. If we accept this scientific definition of disease, then it follows that mental illness is a metaphor, and that asserting that view is stating an analytic truth, not subject to empirical falsification. (Szasz 2011: 179)

Szasz further argued (1974: 455) that the fact of dealing with the diagnosis and

treatment of metaphors would be enough to place psychiatry within the class of the pseudosciences, together with alchemy and astrology, echoing a demarcation criterion first outlined by philosopher Karl Popper, an enthusiast admirer of Szasz's work (see Buchanan-Barker & Barker 2009). Although the absence of a widely accepted clearcut demarcation criteria makes it hard to support that captivating claim (see Laudan 1983), or to formulate the philosophical debate around the reality of mental illnesses in terms of a science/pseudoscience distinction, it is true nonetheless that the one of "mental illness" is a metaphor, and that such metaphor has long been adopted as a guideline principle for scientific inquiry. The critique of Thomas Szasz was meant to dismantle the social ontology of mental illness by means of denying empirical truth value to metaphors. An analysis of such critique, directed to a system of metaphors, or a mythology of assumptions, would go as follows. According to that distinction, there would be a key difference between accepting, or proving, the truth of these two medical sentences, or diagnosis:

(1) "*the patient has conversion disorder*";

(2) "*the patient has an HIV infection*".

Such difference would rest upon an ontological distinction in the status of the entities taken into consideration, namely: the fact the the latter diagnosis (2) is likely to be based on the scientific evidence that there is, out there in the world, a material, objective, observable entity at play (the HIV virus) that has been found in the patient's organism by means of a blood test, detecting the presence of a microorganism in accordance with the germ theory of disease. In contrast, in the first statement (1) the psychiatrist is assuming the existence of an unproven entity which is an immaterial, unobservable, theoretical construct and is held to be responsible for someone's observable behaviours and declarations, in accordance to a latent theory of disease, to be confirmed when and if scientific research will ever be able to identify a biomarker. Furthermore, the first statement is related to another series of inferences, none of which goes according to materialist scientific reductionism. Such system of assumptions would proceed as follows:

- (3) *“There are normal and abnormal behaviours”;*
- (4) *“Some abnormal behaviours are to be considered as symptoms of a disease”;*
- (5) *“There are out there in the world several supposed, latent, unobserved entities responsible for those observable abnormal behaviours”;*
- (6) *“Such unobservable, undetectable entities are to be considered as diseases, and reliably correspond to the behavioural descriptions listed in the DSM and ICD catalogues”;*
- (7) *“The theoretical construct psychology calls ‘the mind’ can get sick”;*
- (8) *“Physicians are able and entitled to identify and treat the sickness of the mind”;*
- (9) *“Social scientists like psychologists as well are entitled to treat the sicknesses of the mind, but not to identify them” (in fact, they still can not produce diagnoses recognized by State authorities; their ontological statements can not be true).*
- Etc.*

According to Szasz, this system of unproven beliefs would be nonsensical enough to classify psychiatry as a pseudoscience. That is indeed a really tempting claim. However, we will argue that this is precisely where the argument against the metaphor of mental illness ceases to be endorsable. The most obvious objection, at this point, shall be: if the expression “mental illness” is a metaphor, so is the phrase “hysterical behaviours are a language” (or a protolanguage), which is the premise of both his model and the model of Lacan and others. The only difference rests on the premises and consequences of the metaphorical proposal under consideration: one set of analogies invites to explain a class of elements in terms of diseases, the other suggests to translate them in terms of communication acts. Therefore, if the former statement is to be considered pseudoscientific on the base of a metaphorical bias, so should be the latter. The claim gets even more interesting as metaphors are there considered in terms of “analytic truths not subject to falsification”. In fact, the presence of metaphors alone does not prevent a scientific statement from being true.

Or better, neither the presence nor the absence of metaphors can guarantee around the truth or falsehood of a scientific statement, or theory. Thus Lakoff & Johnson summarized the issue back in the 1980s:

an understanding of truth in terms of metaphorical projection is not essentially different from an understanding of truth in terms of nonmetaphorical projection. The only difference is that metaphorical projection involves understanding one kind of thing in terms of another kind of thing. That is, metaphorical projection involves two different kinds of things, while nonmetaphorical projection involves only one kind. (Lakoff & Johnson 1980: 171)

If any scientificity hallmark required one to drop metaphors entirely, then also the theory that “dysfunctional behaviours are protolanguages” would have to be abandoned, or labeled as pseudoscientific. Caution: with this remark we are not advocating for psychiatry and its dramatic epistemological inaccuracy; we are rather taking up for the relevance of metaphors within scientific inquiry. In doing so, we are aware that there are indeed some risks involved in the adoption of metaphors like “mental illness”. For instance, a confirmation bias may well be at work under the surface, precisely through the images supported by the application of metaphors:

Metaphors may create realities for us, especially social realities. A metaphor may thus be a guide for future action. Such actions will, of course, fit the metaphor. This will, in turn, reinforce the power of the metaphor to make experience coherent. In this sense metaphors can be selffulfilling prophecies. (Lakoff & Johnson 1980: 157)

Nonetheless, metaphors are fundamental to scientific inquiry, serving as essential tools for heuristic discovery, cognitive understanding, and public communication. Scientists rely on metaphorical language to bridge the gap between abstract, unfamiliar phenomena and concrete, everyday experiences, effectively mapping known concepts onto unknown ones. Metaphors guide model-building and hypothesis generation by highlighting structural similarities between different

domains, as seen with psychological theory. Research revealed quite a nuanced scenery, where metaphors are not merely literary devices, but conceptual mechanisms that facilitate theory formation and innovation. Economic “growth”, black “holes”, inflation “rising”, magnetic “carpet”, genealogical “trees”, “dark” matter: all such expressions are dependent on metaphoric thought. Scientific methods and descriptions in biology, the life sciences, medicine, are inextricably infused with metaphors, at many levels. As recently noted by Andrew Reynolds (2022), mechanic metaphors of the human body in medicine are used to promote the manipulation of its components; engineering metaphors portray organisms and cells as machines that can be disassembled and rearranged. Quantum entities associated with the particle kind are expected to behave in a certain way; associated with the wave kind they are expected to behave in a different way (and surprisingly they go both ways). Metaphors deeply operate in classification, or taxonomy, as well as in observation, demonstration and scientific reasoning in general. On this matter, some much interesting cases of marine biology classification types based on resemblance metaphors have meticulously been collected by Ureña & Tercedor (2011), who have extracted and classified several terms from a bilingual corpus of marine biology academic journals. Metaphors may be considered at play even in the simple act of naming reality, before even entering theorization. Consider the cases of the species named *bailarina española*, *manta*, *ochavo* or *pufferfish*:

the Spanish metaphorical common name *bailarina española*, which designates a species of nudibrach (scientific name *Hexabranchus sanguineus*). [...] This metaphor combines physical appearance and behavioural patterns. [...]

The Spanish term *ochavo* refers to a fish that is compared to an *ochavo*, a coin (source-domain concept) that was exclusively used in Spain during a specific time span. [...]

The word ‘*manta*’ literally refers to a rough-textured cotton fabric or blanket made and used in Spanish America and the southwest United States. The metaphorical motivation is shape because of the extensive flattened body of the fish designated [the *mobula*]. [...]

Pufferfish receive their name because they inflate with air or water to scare their

predators away. (2011: 233, 223, 226, 229)

But metaphors in science do not intervene only at the level of resemblance, and do not just serve the basic purpose of classification. The very understanding of the relations among entities is intertwined and guided by metaphoric thinking. As claimed by Reynolds (2022: 2): “metaphor involves talking about, describing, or thinking about one thing in terms typically ascribed to another quite different sort of thing”. Moreover, thinking and knowing happen within a cultural context, driving observation and understanding. Metaphors participate both as a cultural product and as a general tool for framing further inquiry. Analogical or metaphorical thought is both a determined and determining force, shaping the very objects of scientific study. This may also come with some risks of misconception, when analogies and metaphors happen to convey ideological biases or political agendas:

Our choice of words not only reflects deep cultural cosmologies and historical influences but also reinforces cultural norms, ideologies, and beliefs. Though metaphors are indispensable tools for communicating science, they are sometimes misleading to the general public and can be easily exploited in attempts to further social and political agendas. [...] Remnants of colonialism also echo within scientific discourses through the use of metaphors that equate the practice of science itself with penetrating the unknown, conquering nature, and pioneering new frontiers. Many science-related metaphors harbor traditionally masculine values and may activate implicit associations between science, gender, and/or race, thus reinforcing dominant stereotypes about who does science. (Taylor & Dewsbury 2018: 3)

A crucial illustration of such relation in objectivation has been provided by two feminist researchers in the field of the biological sciences. So far, in this chapter, we have been largely advocating for the King, by exploring the way metaphors integrate knowledge and discovery; let us also consider now the Canon’s disclaimer, and observe how certain images, models, and representations may actually invalidate, interfere with, or impair clear thinking and scientific observation.

In the 1990s, philosopher Kathleen Okruhlik and anthropologist Emily Martin paid close attention to the role that the “Sleeping Beauty waiting on Prince Charming” metaphor has been playing in the scientific understanding of fertilization:

Just as women are seen to be passive and men active, so traditionally have egg and sperm been assigned the traditional feminine and masculine roles. The egg waits passively while the sperm heroically battles upstream, struggles against the hostile uterus, courts the egg, and (if victorious) penetrates by burrowing through, thereby excluding all rival suitors. The egg's only role in this saga is to select which rival will be successful. [...] using electron microscopy it can be shown that the sperm doesn't just burrow through the egg, as previously thought. Instead, the egg directs the growth of small, finger-like projections of the cell surface to clasp the sperm and slowly draw it in. This mound of microvilli extending to the sperm was discovered in 1895 when the first photographs of sea urchin fertilization were published; but it has largely been ignored until recently. (Okruhlik 1994: 21)

According to Martin (1991), societal stereotypes have been applied also to the gamete cells of even non-human animals. And since we are dealing with cells, it may be not unrelevant to highlight that even the very term “cell” is a metaphor:

In 1665 the English naturalist Robert Hooke, in one of the first written accounts of observations made with the newly developed compound microscope, described the tiny little boxes he saw in the tissue of dead cork plant as “cells,” because they reminded him of the hexagonal cells of a bee’s honeycomb. [...] What caught his attention was the appearance of a series of little spaces distinctly separated from one another by rigid walls. (Reynolds 2022: 68-69)

Going further on the theoretical level, the situated approach suggests that the kind of metaphors and the modes of understanding of reality may be determined, or at least strongly influenced, by the cultural background of the scientist. In this sense, if some sets of behaviours are presented to a Western doctor, it will be very likely that a

system of metaphors involving symptoms, dysfunctions and disease are proposed as an explanation. The same set of behaviours presented to a religious hierophant in Malaysia will be likely to be semanticized in a different set of images and analogies, that may be formulated, for instance, in the terms of spirit possession (Ong 1989). The subject's body as well, at the very core of such reasoning, will be driven by its own cultural background when formulating such behaviours and their meanings:

the concrete sociocultural situatedness of individual language agents inevitably leads them to employ interpretive conceptualizations that are partial, i.e. not shared by all of the members of the "expert" scientific community in question [...]. Sociocognitive Terminology Theory [...] pioneered research into the way metaphor models life science knowledge as a consequence of the ongoing social, cognitive, and technological advances in Western civilisation. (Ureña & Tercedor 2011: 218)

Going back then to the relations between psychiatry and its illness metaphor, it is clear how properties of a source domain are attributed to the target domain by means of metaphoric relations. It is by means of analogy, more than logic, that under the medical gaze human behaviour receives a symptomatic character, allowing for the description of syndromes, for diagnosis as well as therapy and pharmacologic prescriptions. It is true indeed that the metaphor of mental illness can be a dangerous one, as long as the prescriptive function of metaphors invites scientists to keep on thinking in accordance with the metaphor, and may end up caught under the influence of a self-fulfilling prophecy (with the release provided by psychodrugs); it is also true that better metaphors may be out there to be considered, tested or invented. And again, it has been well documented that the deployment of the "mental illness" metaphor has been responsible for the unforgivable violation of basic human rights, brutal surgical procedures, sexual abuses and social stigmatization on the part of the scientific community (Arbex 2013). However, while we welcome the proposal to consider behaviours as symbolic forms of expression, the idea that being based on metaphors would be enough to qualify psychiatry as a pseudoscience is philosophically too challenging to uphold. Besides the ontological and epistemological problems discussed above, recent studies on the life of metaphors within scientific

understanding provide that:

metaphors play at least two important roles in science: (1) a heuristic role, suggesting analogical models or hypotheses to be explored in order to discover important unifying similarities or patterns in nature [...] and a cognitive role in the development of explanations that increase our understanding of nature and its mechanisms. (Reynolds 2022: 7)

As nature does not come to scientists with its own language (albeit a door should be kept open towards mathematics), the understanding of the world requires that human beings adopt their symbolic thinking and communicative tools to interact both with nature and between themselves while studying nature. Therefore, the properties given to the objects found in the external world “are not properties of objects in themselves but are, rather, interactional properties, based on the human perceptual apparatus, human conceptions of function, etc.”. Further following Lakoff & Johnson, we are to observe that “true statements made in terms of human categories typically do not predicate properties of objects in themselves but rather interactional properties that make sense only relative to human functioning” (1980: 165). Those dynamics do involve logic, analogic, symbolic as well as metaphoric thought at various stages, also within science, to the point that no difference can be easily sketched under a simplistic literal/metaphoric distinction model. We have to acknowledge that a change of metaphor changes the way we think about reality, by altering the relation between the two domains put in relation by that metaphor. Metaphors are one with (scientific) knowledge and imagination; therefore their presence alone can not, anyhow, qualify good or bad science, let alone a science/pseudoscience distinction:

So here is an important lesson: The distinction between metaphor and literal terminology is not a hard and fast one; one can transition to the other, even in science. [...] Rather than changing how we think about the metaphor, in some cases the metaphor actually ends up quite literally changing the thing to which it is applied. This is what happened with the metaphor that “cells are chemical factories.” (Reynolds 2022: 70-71)

A better distinction may be considered, somehow shadowing Lakatos' separation between progressive and regressive research programmes. Thinking again about medicine and psychology, one would probably expect physicians to be committed to understand what system of metaphors may represent the best conventional option for the sake of the patient. All things considered, we suspect that the language metaphor, as provided by brilliant doctors like Breton, Bernheim, Lacan and Szasz, among others, still represents a good try. Besides, the emergence of new scientific theories may also well depend on the ability of invention of new, unconventional metaphors.

What is most often missed in medical treatises, and certainly in psychiatry - the most conjectural and risky of these fledgling sciences - is precisely the true scientific spirit, which is not satisfied with a *magister dixit* or conventional formulas. (Borges 1999b: 172-173)

DSM and ICD category of hysteria was indeed a socially constructed scientific fact. Its reality, or rather the process of its realization, represents a historical ontological crossroad where scientific knowledge and Unjustified False Belief happen to coincide. In this respect, along chapters one and three we had the opportunity to illustrate that the existence of hysteria has never been supported by material, organic evidence at any stage of its life, according to the long-lasting, unsolved problem of the “missing lesion”, which has accompanied the nosological category since its very birth (see Charcot & Marie 1892). Social warranty, or justification, around this belief (Hacking 1998) has also been challenged since the very beginning of its life, particularly by the presence of several competing theories advanced by peers (Babinski, Bernheim, Breton, Szasz, Lacan and more) showing that very different proposals and descriptions were largely based on the same premises but reached radically diverse conclusions by means of shifts in interpretation and explanation. In disagreement with Hacking, this kept us from endorsing the idea that doctors of the day were anyhow warranted to believe in its existence. Some of the theories around dysfunctional behaviours proposed a separate taxonomical designation for the observed phenomenon (psychasthenia, pithiatism, suggestion, etc.), some others kept the name hysteria but advanced quite different content and explanation, fostering our moderately relativistic idea that not one, but many hysterias were out there to be possibly known by the medical epistemic community. By considering how interpretation was intertwined with observation, Lacanian, Freudian, Pavlovian and Charcotian hysterias could then be regarded as different kinds of entities, competing for validation in the arena of scientific knowledge production. If we accept that many hysterias possibly existed, we may be inclined to consider that there has virtually been an entity for every theoretician who dealt with the issue. Some other physicians, as seen, denied for good the existence of hysteria, adopting equally rational arguments, if not more so, with evidence based, empirical research. Virtually dismissed by Babinski and the Paris Neurological Society early in 1908, hysteria nevertheless survived its execution by engaging with the realm of the mind under the

works of Janet, James, Breuer and Freud. In this respect, we have seen that both medicine (at first neurology, later psychiatry) and psychology (under psychoanalysis) largely relied on a model of the psyche, or mind, conceived as a metaphysical entity, fully integrating scientific realism. We have seen how even the materialist scientific model still rests on immaterial religious-metaphysical assumptions, representing an intriguing subject for the integration of complementary scientific disciplines based on a theological belief.

To maintain the category at work, medicine has extended its epistemic scope towards the realm of the immaterial mind, absorbing metaphysical objects and premises, in a way that the history of the theories of hysteria further allows us to illustrate that within scientific activity there are categories that, although validated by the epistemic community, have the function of defining not scientific kinds *per se* but rather research areas and knowledge ambitions that indicate and give life to new disciplines, theories and methods, according to the vision of epistemic heterogeneity (Laudan 1983), being able to keep on board both physical and metaphysical objects and notions as long as they are provisionally functional.

Proceeding from that, we can claim that hysteria comes to integrate precisely that specific set of entities in the history of science. We argue that hysteria has to be considered, more than a proper scientific entity, as a historical indicator of new domains of investigation, a necessary myth whose function was to stimulate the development of novel scientific research, fields and theories dedicated to the abstract mind, language, social environment and their relations with the physical and symbolic body. We further have described how the very meaning and the ontology of the mind (psyche) has changed as a result of its interactions with organicist, mechanist, and medical models of understanding.

With this, we did not intend to suggest that scientific knowledge would be reducible or conformable to its historic conditions of existence. On the contrary, by refusing the notion of “Transient Mental Illness” we think scientists as well can take advantage of similar historical and epistemological appraisals in order to better understand the wider range of social and philosophical mechanisms that take part in the evolution and affirmation of scientific practice. As we are unwilling to sociologically support the idea that all entities and kinds created in the history of science are to be considered scientific by default, which would allow for too many false beliefs to gain

the status of scientific knowledge, we rather argue in favour of the claim that the evolution of the sciences also requires the adoption of non-scientific concepts in order to advance their knowledge production towards unknown domains (see Foucault & Chomsky 2011). In this sense, we also support the pragmatic claim that scientific statements, more than true, have rather to be valid in order to function within the process of knowledge production, and that the validation criteria adopted by the scientific community are subject to varying assessments, adapting the standards for knowledge attributions according to the purposes, the fields, the responsibilities and the standards in force (Resnik 2000; Lewis 1979). We thereby propose to consider the life of hysteria under those analytic coordinates.

We do not claim that hysteria was not scientific according to our current models of knowledge, which would be an application of a commensurability principle (whatever its merit); we are rather drawing attention to the evidence that, to the eyes of many, that specific category was not acceptable even in the XIX century, when it has been established as a scientific kind. Relevantly, and this may be considered our focus, that dismissal did not prevent hysteria from reaching the end of the XX century as a scientific diagnosis. In some cases, as seen above, even the XXI century.

By taking hysteria as the reference of our research, we have also been showing what kind of ontological and epistemological *impasse* prevents material reductionism alone to account for the definition of so-called dysfunctional behaviours, further giving sense of how scientific practice itself is deeply embedded and unavoidably intertwined with metaphysics, arts, religious beliefs, language and philosophy. We claimed that even if, by lucky guess, the biological basis of such dysfunctional behaviors were to be discovered one day, the system of classification that produced the DSM and ICD categories would not deserve to be considered properly scientific in the sense of the empirical sciences, but merely in the realm of the social ontology of its kinds and entities. Scientific facts in psychiatry are thus considered as social facts, for the very fact of being facts instead of things (see Wittgenstein 1922). We could see that, by adopting a taxonomy of illness based on a social ontology, the epistemology of psychiatry comes to represent a very intriguing case of liminality between hard sciences and social sciences, between science and philosophy, and even between philosophy and arts (Didi-Huberman 1982; Breton & Aragon 1928).

Having to further consider the very confusing puzzle of DSM rewritings overtime, in chapter three we came to conclude that the methodology adopted by mainstream psychiatry to identify (or create) its diagnostic constructs, or scientific kinds, is still at the mercy of serious ontological and epistemological inconsistencies, inaccuracies and contradictions, as widely documented by philosophical, psychological and scientific inquiries (Moncrief 2023; Ghaemi 2013; Hacking 1998; Szasz 1974). Besides a general method-object contradiction, forcing the abstract mind, human experience and the soul into the materialistic empirical domain of medicine, it has been highlighted how DSM and ICD taxonomic model, that produced several categories which soon had to be dismissed due to their foolishness (homosexuality, multiple personality, hysteria, etc.), has not yet shifted away from its original Kraepelian model, often developed against the late ideas of Kraepelin himself (see Heckers et al. 2021): a descriptive model where observation of symptoms becomes the diagnostic construct itself.

We had to acknowledge that the same biased, unsuccessful, inadequate criteria that produced old dismissed constructs are still producing the current ones, making uncertain and untenable the idea that contemporary doctors would be more warranted today to believe in the reality of current DSM and ICD constructs than their ancient predecessors. We held that some evidence of such ongoing unreliability, among others, is represented by the significant overlap between conversion and dissociation, as well as by the arbitrary shift of the term “dissociation” itself, which has historically identified both a symptom and a diagnosis, with a very evident semiological contradiction. Further inconsistencies, inherent to current psychiatric taxonomy model, have been indicated by the scientific community and represent as many relevant *impasses* on the way towards warranty or justification. These include: the very questionable distinction between the theoretically separate kinds of “bipolar disorder” and “schizophrenia” (see Lake 2012; Owen 2010); the fact that the diagnosis is representing an artifact of the classification system, not underlying an actual phenomenology (Borgogna et al. 2023); the lack of agreement around the very existence of specific entities like “schizophrenia” (Repnikov 2023; van Os 2017; 2016); the existence of several, overlooked alternative models of classification which would rely on different ontologies, reshaping the entities psychiatry identifies as its object of study (Dalglish et al. 2020; Kotov et al. 2018; Jaspers 1913); and even the very puzzling, contemporary use of the dismissed diagnosis of “mass hysteria” in

medical journals to describe current clinical reality (Jeong et al. 2024; Zhao et al. 2021).

Further opposing another thesis advanced by Ian Hacking (2007; 1998) the analysis of such abundant, growing arguments within the scientific community led us to conclude that, although DSM revisions have very frequently (and perhaps much too frequently) undertaken various “cosmetic” shifts, attributing new names to sets of human behaviours merely regrouped and reorganized, this does not represent a Kuhnian scientific revolution, as long as the underlying classification model has not been modified in its ontological premises. As seen above, Kuhn himself had the chance to take distances from a nominalist reading of his thoughts on the relation between taxonomical shift and scientific revolutions (Kuhn 1994). As a larger portion of the scientific community is becoming aware of such inadequacies, it has also been calling for a more radical shift from the paradigm in force (see Northoff 2023; Dalgleish et al. 2020). Alternative ontological models to the current approach have been advanced (Hechers et al. 2021; Clark et al. 2017), but they have been met with strong resistance regardless of the inappropriateness of the system in place.

With a pattern that represents no novelty in the history of science, an unsatisfactory scientific status quo is far too intertwined with other (extra-scientific?) social entities and institutions, like private health care insurances, capitalist pharmaceuticals, public and private academic institutions, State health care systems, labour policies, etc., which have been built on recognition and mastery of current taxonomic units and make it even more difficult to drop and delegitimize current kinds to introduce novelties, further illustrating how the production of scientific knowledge is deeply embedded not only with philosophical and theological premises, but also with wider social and economical factors, strongly determining the horizons of its evolution and existence. This brought us to further highlight the social-political component of knowledge production in scientific practice.

In addition to that, we had the chance to dismiss the claim that hysteria would represent a case of a pseudoscientific category in the history of medicine. During this work, we in fact happened to disprove some of the first expectations we were holding about the claims of Popper and Szasz on the relations between mental illness and the epistemological category of pseudoscience. We were expecting to seal the debate under the science/pseudoscience distinction as proposed by Szasz and Popper.

However, by reviewing the origin and purposes of the Popperian reflections around the demarcation problem, we have been forced to define pseudoscience more as a charge than as a status, property or domain. As seen in chapter two, the activities merged under the label of Science have rightfully earned it a privileged status and an authority which are inconceivable in any other branch of knowledge. The specific methods, rules and fact-finding practices undertaken within the sciences have earned them an absolute prestige and a striking power over the ability to provide us with the most warranted knowledge about the world. This comes with a risk: that of people and organizations trying to exploit some of that prestige without doing all the necessary work, by claiming scientific authority in order to support their claims, policies, and practices. We argued that the Popperian discourse around pseudoscience stepped in precisely as a tool to protect science from such abusive claims. Scientific heterogeneity is in fact so wide that not even scientists have control over its boundaries and limits (see Feyerabend 1999; 1975). Pseudoscience charges are then seen as a political tool, deployed to help an epistemic community define and maintain the uncertain, unclear, evershifting and everchanging borders of the scientific domain. This is proposed as the function of the category of pseudoscience within epistemology, from Popper onwards. As for the specific claims of Thomas Szasz around psychiatry as a pseudoscience and hysteria as a pseudoscientific category, we have considered that such a charge was rather meant to reaffirm and prescribe some materialistic dogmas on the definition of disease, together with an unlikely illusion of a value-free, metaphor-free, discourse-free science.

By way of conclusion, we could then resume our submissions as follows:

- A) given the absence of material references able to justify clinical deductions over human behaviours, if diagnostic constructs about the mind are based on a social ontology, it follows that there has been a hysteria for every theoretician who advanced a theory under its name, that none of them was real in the terms of material reductionism, but they were real indeed as a scientific social constructions;
- B) the elimination of the nosological category “hysteria” may well represent an evolution of psychiatry towards scientificity (clearing a gender bias and a philological bias); still, a deep, structural epistemological confusion remains in place;

- C) it is not possible to fruitfully apply the category of pseudoscience to hysteria, given the absence of epistemic invariants within the realm of scientific endeavours; still, such category is regarded as non-scientific due to our respect towards science;
- D) in contrast with Hacking's claims, and according to Kuhn's last works, naive, "cosmetic" taxonomic shifts like the ones represented by DSM revisions are not to be considered as a sufficient condition to identify a scientific revolution;
- E) since we do not consider a taxonomic reshaping as a scientific revolution or a paradigm shift, we still doubt whether contemporary psychiatrists are scientifically warranted to assume they are observing the diagnostic constructs that replaced hysteria: somatic symptom, conversion and dissociative disorders; the same applies to the homosexuality/gender dysphoria shift, among numerous others;
- F) the history of hysteria provides us with a further illustration that, contrary to the idea of anything like a value-free science, scientific imagination is intertwined with sets of representations, metaphoric structures and social narratives that have the power to function as self-legitimized producers of discursivity;
- G) in the history of hysteria, such dimension of the scientific imaginary produced a specific perception of the feminine, an ontology of mental illness and a set of epistemological criteria capable to identify and deal with medical taxonomical kinds that constitute an essential phenomenological threshold.

Accordingly, some intriguing relations between realism and nominalism have been highlighted in chapter four. A wider look has been given at the life of metaphors in scientific reasoning. The epistemic heterogeneity accompanying its evolution, and eventually its dissolution, included not only the mentioned metaphysical assumptions as well as socially-produced set of scientific facts: it also involved the extensive use of metaphors to help transpose systems of meaning from one theory, or field, to another. We hence analyzed some of the metaphors that sustained the medical gaze through a narrative, a meaning and a purpose. Unlike Szasz, who considered such metaphors as a hallmark of pseudoscience, we rather regarded at their deployment as a common tool adopted by scientific reasoning to validate theories, practices and conclusions. By taking a closer look into the role of metaphors in the definition of the reality of mental illness, we could deeper consider the relation between language and science in creating meanings and knowledge.

Finally, let us wrap this up under some sign of irony. In the Act II, Scene II of Shakespeare's *Romeo and Juliet*, we can read that: "*A rose by any other name would smell as sweet*", suggesting the world is independent from the names we call it. Endorsing the reflections of Ian Hacking about social kinds, or "interactive kinds" (1999; 1996), we defended that something more is at work in the scientific definition of reality as provided by American psychiatry. In this sense, hysteria was both more and less than the DSM category psychiatry described. We have rather seen how the fact of inventing a name, a nosological category, a scientific kind, can bring a reality into existence, so that other subjects get to recognize it in the world, reinforcing its existence by means of diagnosis. Destroying it, however, may not always be as effective. The relentless survival of hysteria, far beyond its scientific elimination, shows how little control we have over what we create, a lesson every parent knows too well. Hysteria was a quite easy category to make up, yet an almost impossible one to destroy. If little less than rumors, a philological bias and a widespread female discrimination brought it into the world, it continued to exist long after its early elimination by Joseph Babinski in 1909, coming to represent an ontological universal without individual particulars. And it all happened, it is worth remembering, within the scientific domain. As seen, the reality of hysteria has been clinging more to a specific set of metaphors (mental illness, psychological trauma, defence mechanism, etc.) than to any biological ontology. In the debate opposing realism and nominalism, a lovely paradox here emerges: the scientific method, which we believe to be firmly attached to the first, is often capable of producing the most striking arguments in favor of the second.

BIBLIOGRAPHY

AGAMBEN, GIORGIO (1977), *Stanze. La parola e il fantasma nella cultura occidentale*, Torino: Einaudi.

AKAVIA, NAAMAH (2005), *Hysteria, Identification, and the Family: A Rereading of Freud's Dora Case*, in «American Imago», Vol. 62, No. 2, pp. 193–216.
doi:[10.1353/aim.2005.0021](https://doi.org/10.1353/aim.2005.0021)

ALBENGRES, EDITH (2002), *Vie et oeuvre de Jean-Martin Charcot*, Thèse pour le diplôme d'État de docteur en Médecine, Université Paris Val-de Marne, Faculté de Médecine de Créteil.

ALLSOPP, KATE, et al. (2019), *Heterogeneity in Psychiatric Diagnostic Classification*, in «Psychiatry Research», 279, pp. 15–22.
doi:[10.1016/j.psychres.2019.07.005](https://doi.org/10.1016/j.psychres.2019.07.005)

ALTER, ROBERT (2018), *The Hebrew Bible: A Translation with Commentary*, New York: WW Norton.

ALZHEIMER, ALOIS (1995) [1907], *Über eine eigenartige Erkrankung der Hirnrinde*, in «Allg Z Psychiat Psych Gerichtl Med», Vol. 64, pp. 146–98. An English translation of Alzheimer's 1907 paper, in «Clinical Anatomy», Vol. 8, pp. 429–31.
<https://doi.org/10.1002/ca.980080612>.

AMARAL DO ESPÍRITO SANTO, HELENA M. (2008), *Histeria: a unidade perdida*, Dissertação de Doutoramento em Saúde Mental, Instituto de Ciências Biomédicas Abel Salazar, Universidade do Porto.

AMERICAN PSYCHIATRIC ASSOCIATION (1952), *Diagnostic and Statistical Manual of Mental Disorders, DSM*, Washington DC: APA Publishing.

AMERICAN PSYCHIATRIC ASSOCIATION (1987), *Diagnostic and Statistical Manual of Mental Disorders, DSM-3-R*, Washington DC: APA Publishing.

AMERICAN PSYCHIATRIC ASSOCIATION (1994), *Diagnostic and Statistical Manual of Mental Disorders, DSM-4*, Washington DC: APA Publishing.

AMERICAN PSYCHIATRIC ASSOCIATION (2013), *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision DSM-5*, Washington DC: APA Publishing.

AMERICAN PSYCHIATRIC ASSOCIATION (2022), *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision DSM-5-TR*, Washington DC: APA Publishing.

ANDERSON, BENEDICT (1983), *Imagined Communities*, London: Verso.

- ANTONUCCI, GIORGIO (1986), *I pregiudizi e la conoscenza critica alla psichiatria*, with a preface by Thomas S. Szasz, Roma: Cooperativa Apache.
- ARBEX, DANIELA (2013), *Holocausto Brasileiro*, São Paulo: Geração Editorial.
- ARENDT, HANNAH (1958), *The Human Condition*, Chicago IL: University of Chicago Press.
- ARISTOTLE (1984), *The Complete Works of Aristotle*, edited by Jonathan Barnes, Princeton NJ: Princeton University Press, 2 vol.
- ÁVILA, LAZSLO ANTÔNIO & TERRA, JOÃO RICARDO (2010), *Histeria e somatização: o que mudou?* In «Jornal Brasileiro de Psiquiatria», Vol. 59, No. 4, pp. 333-340. doi: [10.1590/S0047-20852010000400011](https://doi.org/10.1590/S0047-20852010000400011)
- BABINSKI, JOSEPH (1901), *Définition de l'hystérie*, in «Revue neurologique», Tome IX, pp. 1074-1080.
- BABINSKI, JOSEPH (1909), *Démembrement de l'hystérie traditionnelle: pithiatisme*, Paris: Imprimerie de la semaine médicale.
- BACHETTI, MATTEO et al. (2022), *Orbital Decay in M82 X-2*, in «The Astrophysical Journal», vol. 937, art. 125. doi: [10.3847/1538-4357/ac8d67](https://doi.org/10.3847/1538-4357/ac8d67).
- BARSTOW, ANNE L. (1994), *Witchcraze: a New History of the European Witch Hunts*, San Francisco CA: Pandora.
- BARTHOLOMEW, ROBERT E. (1990), *Ethnocentricity and the Social Construction of 'Mass Hysteria'*, in «Culture, Medicine and Psychiatry», Vol. 14, No. 4, pp. 455–494. doi:[10.1007/bf00050822](https://doi.org/10.1007/bf00050822)
- BASSO, ELISABETTA (2014), *L'épistémologie clinique de Ludwig Binswanger (1881-1966): la psychiatrie comme "science du singulier"*, in «Histoire, Médecine et Santé», n. 6, pp. 33-48.
- BATESON, GREGORY (1972), *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution and Epistemology*, Lanham: Jason Aronson Inc.
- BATESON, GREGORY, RUESCH, JURGEN et. al. (2008) [1951], *Communication: The Social Matrix of Psychiatry*, New York: Norton & Company.
- BEATTY, HEATHER R. (2015), *Nervous Disease in Late Eighteenth-Century Britain: The Reality of a Fashionable Disorder*, London: Routledge.
- BENNETT, MAXWELL R. (2007), *Development of the Concept of Mind*, in «Australian and New Zealand Journal of Psychiatry», No. 41, pp. 943–56. doi: [10.1080/00048670701689477](https://doi.org/10.1080/00048670701689477).
- BENNING, TONY B. (2016), *No Such Thing as Mental Illness? Critical Reflections on the Major Ideas and Legacy of Thomas Szasz*, in «BJPsych Bull», Vol. 40, No. 6 (Dec), pp. 292-295. doi: [10.1192/pb.bp.115.053249](https://doi.org/10.1192/pb.bp.115.053249)
- BERGER, PETER L. & LUCKMANN, THOMAS (1966), *The Social Construction of Reality*, New York: Anchor Books.

- BERHOUMA, MONCEF (2013), *Beyond the Pineal Gland Assumption: A Neuroanatomical Appraisal of Dualism in Descartes' Philosophy*, in «Clinical Neurology and Neurosurgery», 115, pp. 1661– 1670.
- BERNHEIM, HIPOLYTE (1913), *L'hystérie: définition et conception, pathogénie, traitement*, Paris: O. Doin et fils.
- BIAGGI, ALESSANDRA (2015), *La trasmissione intergenerazionale dello stress: fattori di rischio e meccanismi sottostanti*, in «Journal of Psychopathology», Vol. 21, pp. 40-47.
- BINSWANGER, LUDWIG (1938), *La conception de l'homme chez Freud à la lumière de l'anthropologie philosophique*, in «L'Evolution psychiatrique», Fascicule I, pp. 3-34.
- BINSWANGER, LUDWIG et al. (1958), *Existence. A New Dimension in Psychiatry and Psychology*, edited by R. May, E. Angel, H.F. Hellenberger, New York: Basic Books.
- BINSWANGER, LUDWIG (1963), *Being-in-the-World. Selected Papers of Ludwig Binswanger*, translated with an Introduction by Jacob Needleman, New York & Evanstone: Harper & Row.
- BLACKISTON, DOUGLAS J., ELENA SILVA CASEY, MARTHA R. WEISS (2008), *Retention of Memory through Metamorphosis: Can a Moth Remember What It Learned As a Caterpillar?*, in «PLoS ONE», Vol. 3, No. 3 (March), pp. 1-7. <https://doi.org/10.1371/journal.pone.0001736>
- BLACKMAN, JEROME S. (2003), *101 Défenses. How the Mind Shields Itself*, New York: Routledge.
- BOGOUSLAVSKY, JULIEN (ed.) (2011), *Following Charcot: A Forgotten History of Neurology and Psychiatry*, Basel: Switzerland, Karger.
- BOGOUSLAVSKY, JULIEN (ed.) (2014), *Hysteria. The Rise of an Enigma*, Basel: Karger.
- BOGOUSLAVSKY, JULIEN & WALUSINSKI, OLIVIER (2020), *Charcot, Janet and French Models of Psychopathology*, in «European Neurology», No. 83, pp. 333-340.
- BORGES, JORGE LUIS (1964), *Other Inquisitions*, translated by Ruth L.C. Simms, Austin TX: University of Texas Press.
- BORGES, JORGE LUIS (1983), *Nueve ensayos dantescos*, Madrid: Espasa-Calpe.
- BORGES, JORGE LUIS (1999a), *Collected Fictions*, translated by Andrew Hurley, London: Penguin Books.
- BORGES, JORGE LUIS (1999b), *Libro de sueños*, Madrid: Alianza Editorial.
- BORGOGNA, NICHOLAS C., TYLER OWEN, AND STEPHEN L. AITA (2023), *The Absurdity of the Latent Disease Model in Mental Health: 10,130,814 Ways to Have a DSM-5-TR Psychological Disorder*, in «Journal of Mental Health», No. 33, pp. 451– 59. doi: [10.1080/09638237.2023.2278107](https://doi.org/10.1080/09638237.2023.2278107).

BOUDRY, MAARTEN (2022), *Diagnosing Pseudoscience by Getting Rid of the Demarcation Problem*, in «Journal for General Philosophy of Science», Vol. 53, pp. 83–101. doi: [10.1007/s10838-021-09572-4](https://doi.org/10.1007/s10838-021-09572-4)

BOURDIEU, PIERRE et al. (1971), *La défense du corps*, in «Social Science Information», Vol. X, pp. 45-86.

BOURDIEU, PIERRE (1972), *Esquisse d'une theorie de la pratique*. Genève: Librairie Droz.

BOURDIEU, PIERRE (1980), *Le sens pratique*, Paris: Les Éditions de Minuit.

BOURDIEU, PIERRE (1984), *La Distinction: critique sociale du jugement*, Paris: Les Éditions de Minuit.

BOURDIEU, PIERRE (1997), *Méditations pascaliennes*, Paris: Éditions du Seuil.

BOURGUIGNON, ERIKA E. (2004), *Suffering and Healing, Subordination and Power: Women and Possession Practice*, in «Ethos», Vol. 32, No. 4, pp. 557-574.

BRANZATO, CLÁUDIO E.M. & ZORZANELLI, RAFAELA (2014), *Superando a falsa dicotomia entre natureza e construção social: o caso dos transtornos mentais*, in «Revista Latinoamericana de Psicopatologia Fundamental», Vol. 17, No. 1, pp. 100-113.

BREMAUD, NICOLAS (2015), *Panorama historique des définitions de l'hystérie*, in «L'information psychiatrique», 2015/6, Vol. 91. pp.485-498. doi: [10.1684/ipe.2015.1348](https://doi.org/10.1684/ipe.2015.1348)

BRETON, ANDRÉ & ARAGON, LOUIS (1928), *Le cinquantenaire de l'hystérie*, in «La Revolution Surrealiste», No. 11 (March), pp. 20-22.

BRIQUET, PAUL (1859), *Traité clinique et thérapeutique de l'hystérie*, Paris: J.-B. Baillière et fils.

BROCA, PAUL P. (1861), *Remarques sur le siège de la faculté du langage articulé, suivies d'une observation d'aphémie (perte de la parole)*, in «Bulletins et Mémoires de la Société Anatomique de Paris», No. 6, pp. 398–407.

BRONFEN, ELISABETH (2000), *The Language of Infermity*, in Silvia Eiblmayr et al., *Die verletzte Diva*, München: Oktagon, pp.128-135.

BROUGH, JOHN B. (1975), *Husserl on Memory*, in «The Monist», No. 59, pp. 40–62.

BRÜLDE, BENGT (2007), *Wakefield's Hybrid Account of Mental Disorder*, in «World Psychiatry», Vol. 6, No. 3 (Oct), pp. 163-4.

BRULIN-SOLIGNAC, DIANE et al. (2021), *L'hystérie: histoire d'un concept et de sa réalité clinique*, in «Soins. Psychiatrie», Vol. 42, No. 335, Jul-Aug, pp. 12-17. doi: [10.1016/j.spsy.2021.05.003](https://doi.org/10.1016/j.spsy.2021.05.003)

- BUCHANAN-BARKER, POPPY & BARKER, PHIL (2009), *The Convenient Myth of Thomas Szasz*, in «Journal of Psychiatric and Mental Health Nursing», Vol. 16, No. 1 (Feb), pp. 87–95. doi:[10.1111/j.1365-2850.2008.01310.x](https://doi.org/10.1111/j.1365-2850.2008.01310.x)
- BUTLER, JUDITH (2004), *Undoing Gender*, London-New York: Routledge.
- CANNON, WALTER B. (1922), *Bodily Changes in Pain, Hunger, Fear and Rage*, New York-London: Appleton.
- CARDOSO, ADELINO (2019), *Labirinto do Eu*, Curitiba: Kotter Editorial.
- CASSIDY, MAUREEN (2019), *Hysteria to Functional Neurologic Disorders: A Historical Perspective*, in «The American Journal of Psychiatry», Vol. 15, No. 1 (Sept.), p. 15. <https://doi.org/10.1176/appi.ajp-rj.2019.1501>
- CHALMERS, ALAN F. (1976), *What Is This Thing Called Science?*, Brisbane: University of Queensland Press.
- CHARCOT, JEAN-MARTIN (1882), *Sur la divers états nerveux déterminés par l'hypnotisation chez les hystériques*. Paris: Gauthier-Villars.
- CHARCOT, JEAN-MARTIN & MARIE, PIERRE (1892), *Hysteria Mainly Hystero-Epilepsy*, in D. Hack Tuke (ed.), *A Dictionary of Psychological Medicine*, 2 vols., London: Churchill.
- CHEN, NA (2023), *Reliable 403 Seconds Stationary H-mode Plasmas Demonstrated on EAST*, in «Chinese Academy of Sciences Newsroom», April 17th. Retrieved from https://english.cas.cn/newsroom/news/202304/t20230417_329388.shtml [accessed Nov 2023]
- CHEVRIER, ALAIN (1977), *Charcot et l'hystérie dans l'œuvre d'André Breton*, in Marcel Gauchet & Gladys Swain, *Le vrai Charcot. Les chemins imprévus de l'inconscient*, Paris: Calmann-Lévy, pp. 250-282.
- CHEW, P.K. et al. (1976), *Epidemic Hysteria Among Some Factory Workers in Singapore*, in «Singapore Medical Journal», Vol. 17, No. 2 (Mar), pp. 10-5. PMID: [951594](https://pubmed.ncbi.nlm.nih.gov/951594/).
- CHEW, P.K. (1978), *How to Handle Hysterical Factory Workers*, in «Occupational Health & Safety», Vol. 47, No. 2 (Mar-Apr), pp. 50-2. PMID: [634529](https://pubmed.ncbi.nlm.nih.gov/634529/)
- CHOW, ANDREW R. & PERRIGO, BILLY (2023), *The AI Arms Race Is Changing Everything*, in «Time», February 17th. Retrieved from <https://time.com/6255952/ai-impact-chatgptmicrosoft-google/> [accessed Nov 2023]
- CIXOUS, HÉLÈNE & CLÉMENT, CATHERINE (1975), *The Newly Born Woman*, London: I.B. Tauris.
- CLARK, LEE ANNA et al. (2017), *Three Approaches to Understanding and Classifying Mental Disorder: ICD-11, DSM-5, and the National Institute of Mental Health's Research Domain Criteria (RDoC)*, in «Psychological Science in the

Public Interest», Vol. 18, No. 2 (Nov), pp. 72-145. doi: [10.1177/1529100617727266](https://doi.org/10.1177/1529100617727266)

CLELAND, CAROL E. & BRINDELL, SHERALEE (2013), *Science and the Messy, Uncontrollable World of Nature*, in Pigliucci & Boudry (eds.) *Philosophy of Pseudoscience: Reconsidering the Demarcation Problem*, pp. 183–202. doi: [10.7208/chicago/9780226051826.003.0011](https://doi.org/10.7208/chicago/9780226051826.003.0011)

COHEN, STEWART (1987), *Knowledge, Context, and Social Standards*, in «Synthese», No. 73, pp. 3-26.

COHEN, STEWART (1988), *How To Be a Fallibilist*, in J. Tomberline (ed.), *Philosophical Perspectives 2*, Atascadero CA: Ridgeview Publishing Company, pp. 91-123.

COHEN, STEWART (1999), *Contextualism, Skepticism and Structure of Reasons*, in James Tomberlain (ed.), *Philosophical Perspectives 13*, Epistemology, Cambridge: Blackwell Publishers.

COMPTON, WILSON M. & GUZE, SAMUEL B. (1995), *The Neo-Kraepelinian Revolution in Psychiatric Diagnosis*, in «European Archives of Psychiatry and Clinical Neuroscience», Vol. 245 (Jul), pp. 196-201. doi: [10.1007/BF02191797](https://doi.org/10.1007/BF02191797)

COOPER, RACHEL (2017), *Where's the Problem? Considering Laing and Esterson's Account of Schizophrenia, Social Models of Disability, and Extended Mental Disorder*, in «Theoretical Medicine and Bioethics», Vol. 38, pp. 295–305. doi: [10.1007/s11017-017-9413-0](https://doi.org/10.1007/s11017-017-9413-0).

COSTA PEREIRA, MÁRIO EDUARDO (2004), *Pinel - a mania, o tratamento moral e os inícios da psiquiatria contemporânea*, in «Revista Latinoamericana de Psicopatologia Fundamental», Vol. VII, No. 3 (September), pp. 113-116.

CRAMER, PHEBE (2018), *What Has Happened to Hysteria?*, «Journal of Nervous and Mental Diseases», Vol. 207, No. (Sept.), pp. 705-706. doi: [10.1097/NMD.0000000000000850](https://doi.org/10.1097/NMD.0000000000000850).

CSORDAS, THOMAS J. (1990), *Embodiment as a Paradigm for Anthropology*, in «Ethos», Vol. 18, pp. 5–47. doi: [10.1525/eth.1990.18.1.02a00010](https://doi.org/10.1525/eth.1990.18.1.02a00010)

DA MOTA GOMES, MARLEIDE & ENGELHARDT, ELIASZ (2013), *Hysteria to Conversion Disorders: Babinski's Contributions*, in «Arquivos de Neuro-Psiquiatria», Vol. 72, No. 4, pp. :318–321. doi: [10.1590/0004-282X20130229](https://doi.org/10.1590/0004-282X20130229)

DA MOTA GOMES, MARLEIDE & ENGELHARDT, ELIASZ (2014), *A Neurological Bias in the History of Hysteria: From the Womb to the Nervous System and Charcot*, in «Arquivos de Neuro-Psiquiatria», Vol. 72, pp. 972–975. doi: [10.1590/0004-282X20140149](https://doi.org/10.1590/0004-282X20140149)

DALGLEISH, TIM, et al. (2020), *Transdiagnostic Approaches to Mental Health Problems: Current Status and Future Directions*, in «Journal of Consulting and Clinical Psychology», Vol. 88, No. 3, pp. 179-195. doi: [10.1037/ccp0000482](https://doi.org/10.1037/ccp0000482)

- DANZIGER, KURT (1997), *Naming the Mind: How Psychology Found its Language*, London: Sage.
- DE MARTINO, ERNESTO (1961), *La terra del rimorso*, Milano: Il Saggiatore.
- DE OLIVEIRA, PAULO EDUARDO (ed.) (2012), *Ensaio sobre o pensamento de Karl Popper*, Curitiba: Círculo de Estudos Bandeirantes.
- DE VAAN, MICHIEL (2008), *Etymological Dictionary of Latin and the Other Italic Languages*, Leiden-Boston: Brill.
- DECKER, HANNAH S. (2013), *The Making of DSM-III: A Diagnostic Manual's Conquest of American Psychiatry*, New York: Oxford University Press.
- DELEUZE, GILLES (2000), *Hysteria*, translated by Christiane Spelsberg, in Silvia Eiblmayr et al., *Die verletzte Diva*, München: Oktagon, pp. 279-287.
- DELILLE, EMMANUEL & KIRSCH, MARC (2016), *Natural or Interactive Kinds?*, in «Revue de synthèse», tome 137, 6e série, pp. 87-115. doi: [10.1007/s11873-016-0298-2](https://doi.org/10.1007/s11873-016-0298-2)
- DERKSEN, ANTHONY A. (1993), *The Seven Sins of Pseudoscience*, in «Journal for General Philosophy of Science», Vol. 24, Issue 1, pp. 17–42. doi: [10.1007/BF00769513](https://doi.org/10.1007/BF00769513)
- DEROSE, KEITH (1992), *Contextualism and Knowledge Attributions*, in «Philosophy and Phenomenological Research», Vol. 52, No. 4 (Dec.), pp. 913-929.
- DESCARTES, RENE´ (1983) [1644], *Principles of Philosophy*, translated by Valentine Rodger Miller and Reese P. Miller, Dordrecht: Reidel Publishing Company.
- DESCARTES, RENE´ (1989) [1649], *The Passions of the Soul*, translated by Stephen Voss, Indianapolis IN: Hackett.
- DEVEREUX, CECILY (2014), *Hysteria, Feminism and Gender Revisited: The Case of The Second Wave*, in «English Studies in Canada», Vol. 40, pp. 19-45.
- DI FIORINO, MARIO & FIGUEIRA, MARIA LUISA (eds.) (2003), *Bridging Eastern and Western Psychiatry*, Vol.1, No.1, *Dissociation. Dissociative Phenomena. Questions and Answers*, Milano: Teseo Ricerche Editore.
- DIDI-HUBERMAN, GEORGES (1982), *Invention de l'hystérie. Charcot e l'iconographie photographique de la Salpêtrière*, Paris: Éditions Macula.
- DIDI-HUBERMAN, GEORGES (2000), *Graphic Ecstasy*, translated by Judith Hayward, in Silvia Eiblmayr et al., *Die verletzte Diva*, München: Oktagon, pp. 302-311.
- DOLBY, RIKI G.A. (1987), *Science and Pseudoscience: the Case of Creationism*, in «Zygon», Vol. 22, pp. 195–212.
- DOUGLAS, MARY (2002) [1970], *Natural Symbols*, New York: Routledge.

DRAAISMA, DOUWE (2000) [1995], *Metaphors of Memory: A History of Ideas about the Mind*, Cambridge University Press.

DRESCHER, JACK (2015), *Out of DSM: Depathologizing Homosexuality*, in «Behavioral Sciences», No. 5, pp. 565-575.

DRETSKE, FRED (1970), *Epistemic Operators*, in «The Journal of Philosophy», Vol. 76, pp. 1007-1023.

DRETSKE, FRED (1981), *Knowledge and the Flow of Information*, Cambridge MA: MIT Press.

ENGEL, GEORGE L. (1977), *The Need for a New Medical Model: a Challenge for Biomedicine*, «Science», Vol. 196, No. 4286, (8 Apr.), pp.129-36. doi: [10.1126/science.847460](https://doi.org/10.1126/science.847460). PMID: 847460.

FAUCHER, LUC & FOREST, DENIS (eds.) (2021), *Defining Mental Disorder: Jerome Wakefield and His Critics*, Cambridge MA: MIT Press. doi: [10.7551/mitpress/9949.001.0001](https://doi.org/10.7551/mitpress/9949.001.0001)

FELDMAN, RICHARD (1995), *In Defense of Closure*, in «Philosophical Quarterly», No. 45, pp. 487-494.

FELDMAN, RICHARD (1999), *Contextualism and Skepticism*, in «Philosophical Perspectives», 13, Epistemology, pp. 91-114.

FELDMAN, RICHARD (2001), *Skeptical Problems, Contextualist Solutions*, in «Philosophical Studies», No. 103, pp. 61-85.

FERNANDEZ-BEANATO, DAMIAN (2020), *Cicero's Demarcation of Science: A Report of Shared Criteria*, in «Studies in History and Philosophy of Science» (Part A), Vol. 83, pp. 97-102.

FEYERABEND, PAUL (1958), *An Attempt at a Realistic Interpretation of Experience*, in «Proceedings of the Aristotelian Society», Vol. 58, No. 1 (June), pp. 143-70.

FEYERABEND, PAUL (1962), *Explanation, Reduction and Empiricism*, in H. Feigl & G. Maxwell (eds.), *Scientific Explanation, Space, and Time*, Minneapolis MN: University of Minneapolis Press, pp. 28-97.

FEYERABEND, PAUL (1975), *Against Method. Outline of an Anarchistic Theory of Knowledge*, London-New York: New Left Books.

FEYERABEND, PAUL (1987), *Farewell to Reason*, London-New York: Verso.

FEYERABEND, PAUL (1999), *Knowledge, Science and Relativism*, edited by John Preston, Cambridge University Press.

FICHTNER, GERHARD (ed.) & POMERANS, ARNOLD J. (trans.) (2003), *The Sigmund Freud-Ludwig Binswanger Correspondence 1908-1938*, New York: Other Press.

- FINK, PER (1994), *From Hysteria to Somatization: A Historical Perspective*, in «Nordic Journal of Psychiatry», Vol. 50, No. 5, pp. 353-363. doi: [10.3109/08039489409084959](https://doi.org/10.3109/08039489409084959)
- FINZI, DANIELA & WESTERINK, HERMAN (2018), *Dora – Hysteria – Gender. Reconsidering Freud's Case Study*, Leuven: Leuven University Press.
- FOUCAULT, MICHEL (1963), *Naissance de la Clinique*, Paris: Presses Universitaires de France.
- FOUCAULT, MICHEL, (1966), *Les Mots et les Choses: Une archéologie des sciences humaines*, Paris: Éditions Gallimard.
- FOUCAULT, MICHEL (1972), *Histoire de la Folie à l'Âge Classique*, Paris: Éditions Gallimard.
- FOUCAULT, MICHEL & CHOMSKY, NOAM (2011), *Human Nature: Justice Versus Power. The Chomsky-Foucault Debate*, edited by Fons Elders, London: Souvenir Press.
- FOUNTOULAKIS, KOSTANTINO N., AND EVANGELIA M. TSAPAKIS (2024), *Neither Serotonin Disorder is at the Core of Depression nor Dopamine at the Core of Schizophrenia; Still These are Biologically Based Mental Disorders*, in «Molecular Psychiatry», No. 29, pp. 198–99. doi: [10.1038/s41380-024-02458-z](https://doi.org/10.1038/s41380-024-02458-z)
- FRANKFURT, HARRY G. (2009), *On Bullshit*, Princeton NJ: Princeton University Press.
- FREEMAN, WENDY (2004), *The Hubble Constant and the Expanding Universe*, in «American Scientist», Vol. 91, pp. 36-43.
- FREUD, ANNA (1937), *The Ego and the Mechanisms of Defense*, London: Hogarth Press and Institute of Psycho-Analysis.
- FREUD, SIGMUND S. (1954) [1950], *Project for a Scientific Psychology*, in *The Origins of Psycho-Analysis*, edited by Marie Bonaparte, Anna Freud and Eerik Kris. London: Imago Publishing Co.; New York: Basic Books, pp. 281–391.
- FREUD, SIGMUND S. (1981), *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, translated by James Strachey in collaboration with Anna Freud, London: Hogarth Press and the Institute of Psychoanalysis, 24 vol.
- FREUD, SIGMUND S. (1984), *On Metapsychology*, translated by James Strachey in collaboration with Anna Freud, New York: Penguin Books.
- FREUD, SIGMUND S. & BREUER, JOSEPH (1956) [1895], *Studies on Hysteria*, translated by James Strachey in collaboration with Anna Freud, London: Hogarth Press and the Institute of Psychoanalysis.
- FRICKER, MIRANDA & BRADY, MICHAEL (eds.) (2016), *The Epistemic Life of Groups*, Oxford: Oxford University Press.
- FUSAR-POLI, PAOLO et al. (2019), *Transdiagnostic Psychiatry: a Systematic Review*, in «World Psychiatry», Vol. 18, No. 2 (May), pp. 192–207. doi: [10.1002/wps.20631](https://doi.org/10.1002/wps.20631)

- GALEK, KATHLEEN et al. (2015), *Religion, Meaning and Purpose, and Mental Health*, in «Psychology of Religion and Spirituality», Vol. 7. No. 1 (February), pp. 1-12.
- GALLIC, LUCIE (2021), *L'hystérie, un produit d'origine sociétale*, in «Soins. Psychiatrie», Vol. 42, No. 335 (Jul-Aug), pp. 33-35. doi: [10.1016/j.spsy.2021.05.008](https://doi.org/10.1016/j.spsy.2021.05.008).
- GETTIER, EDMUND L. (1963), *Is Justified True Belief Knowledge?*, in «Analysis», Vol. 23, No. 6. (Jun.), pp. 121-123. doi: [10.1093/analys/23.6.121](https://doi.org/10.1093/analys/23.6.121)
- GHAEMI, SEYYED NASSIR (2006), *Paradigms of Psychiatry: Eclecticism and its Discontents*. «Current Opinion in Psychiatry», Vol. 19, No. 6 (Nov), pp. 619–624. doi: [10.1097/01.yco.0000245751.98749.52](https://doi.org/10.1097/01.yco.0000245751.98749.52)
- GHAEMI, SEYYED NASSIR (2009), *The Rise and Fall of the Biopsychosocial Model*, in «British Journal of Psychiatry», No. 195, pp. 3–4. doi: [10.1192/bjp.bp.109.063859](https://doi.org/10.1192/bjp.bp.109.063859)
- GHAEMI, SEYYED NASSIR (2013), *Why DSM-III, IV, and 5 Are Unscientific*, in «Psychiatric Times», October 14th.
- GHAEMI, SEYYED NASSIR (2023), *Why DSM is Mostly False. 95.2% False, to be Exact*, in «The Psychiatry Letter», November 20th.
- GILMAN, SANDER L. et al. (eds.) (1993), *Hysteria Beyond Freud*, Berkeley: University of California Press.
- GLASS, DAVID J. & HALL, NED (2008), *A Brief History of the Hypothesis*, in «Cell», Vol. 134, pp. 378-381.
- GOLDMAN, ALVIN I. (1967), *A Causal Theory of Knowing*, in «The Journal of Philosophy», Vol. 64, No. 12, pp. 357–372. doi: [10.2307/2024268](https://doi.org/10.2307/2024268)
- GOLDSTEIN, JAN (1982), *The Hysteria Diagnosis and the Politics of Anticlericalism in Late Nineteenth-Century France*, in «The Journal of Modern History», Vol. 54, No. 2 (Jun.), pp. 209-239.
- GORSEN, PETER (2000), *The Stigmatized Beauty from the Salpêtrière*, in Silvia Eiblmayr et al., *Die verletzte Diva*, München: Oktagon, pp. 61-71.
- GOSCHLER, JULIANA (2007), *Is This a Metaphor? On the Difficult Task of Identifying Metaphors in Scientific Discourse*, in «Culture, Language and Representation», Vol. 5, pp. 27-41.
- GRIESBAUER, EVA-MARIA, ED MANLEY, JAN M. WIENER, AND HUGO J. SPIERS (2022), *London Taxi Drivers: A Review of Neurocognitive Studies and an Exploration of How They Build their Cognitive Map of London*, in «Hippocampus», No. 32, pp. 3–20. <https://doi.org/10.1002/hipo.23395>.

- GULDENTOPS, GUY (2020), *Nicolaus Ellenbog's 'Apologia for the Astrologers': A Benedictine's View on Astral Determinism*, in «Bulletin de Philosophie Médiévale», Vol. 62, pp. 251–334. doi: [10.1484/J.BPM.5.120655](https://doi.org/10.1484/J.BPM.5.120655)
- GULOKSUZ, SINAN & VAN OS, JIM (2018), *The Slow Death of the Concept of Schizophrenia and the Painful Birth of the Psychosis Spectrum*, in «Psychological Medicine», Vol. 48, No. 2 (Jan.), pp. 229–244. doi: [10.1017/S0033291717001775](https://doi.org/10.1017/S0033291717001775)
- HAAN, JOOST et al. (2012), *Neurology and Surrealism: André Breton and Joseph Babinski*, in «Brain», Vol. 135, No. 12 (Dec.), pp. 3830–3838. doi: [10.1093/brain/aws118](https://doi.org/10.1093/brain/aws118)
- HACKING, IAN (1984), *Five Parables*, in R. Rorty et al. (eds.), *Philosophy in History. Essays in the Historiography of Philosophy*, Cambridge MA: Cambridge University Press, pp. 103–124. doi: [10.1017/CBO9780511625534.008](https://doi.org/10.1017/CBO9780511625534.008)
- HACKING, IAN (1986), *Making Up People*, in T.C. Heller, M. Sosna and D.E. Wellerby (eds.), *Reconstructing Individualism: Autonomy, Individuality, and the Self in Western Thought*, Stanford CA: Stanford University Press, pp. 222–236.
- HACKING, IAN (1990), *Natural Kinds*, in Barret & Gibson (eds.), *Perspectives on Quine*, Hoboken NJ: Blackwell Publishing, pp. 129–141.
- HACKING, IAN (1991), *A Tradition of Natural Kinds*, in «Philosophical Studies», Vol. 61, pp. 109–126. doi: [10.1007/BF00385836](https://doi.org/10.1007/BF00385836)
- HACKING, IAN (1992), *World-making by Kind-making: Child Abuse for Example*, in M. Douglas & D. Hull (eds.), *How Classification Works: Nelson Goodman among the Social Sciences*, Edinburgh: Edinburgh University Press, pp. 180–238.
- HACKING, IAN (1994), *Working in a New World*, in P. Horwich (ed.), *World Changes. Thomas Kuhn and the Nature of Science*, Cambridge MA: MIT Press, pp. 275–310.
- HACKING, IAN (1995), *Rewriting the Soul*, Princeton NJ: Princeton University Press.
- HACKING, IAN (1998), *Mad Travelers*, London-Charlottesville VA: University of Virginia Press.
- HACKING, IAN (1999), *The Social Construction of What?*, London-Cambridge MA: Harvard University Press.
- HACKING, IAN (2002), *Historical Ontology*, Cambridge MA: Harvard University Press.
- HACKING, IAN (2007), *Natural Kinds: Rosy Dawn, Scholastic Twilight*, in «Royal Institute of Philosophy Supplement», Vol. 61, pp. 203–239. doi: [10.1017/S1358246100009802](https://doi.org/10.1017/S1358246100009802)
- HAMEROFF, STUART, AND ROGER PENROSE (2014), *Consciousness in the Universe: A Review of the 'Orch OR' Theory*, in «Physics of Life Review», No. 11, pp. 39–78. <https://doi.org/10.1016/j.plrev.2013.08.002>

- HAMMER, ALFRED GORDON & ORNE, MARTIN THEODORE (2025), *Hypnosis*, in «Encyclopædia Britannica», August 15th, URL <https://www.britannica.com/science/hypnosis> [accessed May 2025].
- HANSON, ANN ELLIS (1975), *Hippocrates: "Diseases of Women 1"*, in «Signs», Vol. 1, No. 2 (Winter), pp. 567-584.
- HANSON, NORWOOD R. (2018) [1969], *Perception and Discovery*, Cham: Springer.
- HANSSON, SVEN O. (2013), *Defining Pseudoscience and Science*, in Pigliucci & Boudry (eds.) *Philosophy of Pseudoscience*, Chicago: University of Chicago Press, pp. 61-78. doi: 10.7208/chicago/9780226051826.003.0005
- HEALY, DAVID (2006), *The Latest Mania: Selling Bipolar Disorder*, in «PLoS Medicine 3», e236. <https://doi.org/10.1371/journal.pmed.0030185>
- HECKERS, STEPHAN et al. (2021), “*Manifestations of Insanity*”: *Kraepelin’s Final Views on Psychiatric Nosology in their Historical Context*, in «Molecular Psychiatry», Vol 27, pp. 328–334. doi: 10.1038/s41380-021-01232-9
- HEIDEGGER, MARTIN (1992) [1924], *The Concept of Time*, translated by William McNeill, Hoboken: Blackwell Publishing.
- HEISENBERG, WERNER (1958) [1955], *The Physicist’s Conception of Nature*, translated by Arnold J. Pomerans, London: Hutchinson. [*Das Naturbild der Heutigen Physik*, Hamburg: Rowohlt]
- HEISENBERG, WERNER (1958), *Physics and Philosophy*, New York: Harper & Row.
- HEISENBERG, WERNER (2019) [1994], *Reality and its Order*, translated by Martin B. Rumscheidt, Nancy Lukens and Irene Heisenberg, Cham: Springer.
- HILL, NIKKI L., ANN M. KOLANOWSKI, AND DAVID J. GILL (2011), *Plasticity in Early Alzheimer’s Disease: An Opportunity for Intervention*, in «Topics in Geriatric Rehabilitation», No. 27, pp. 257–67. doi: 10.1097/tgr.0b013e31821e588e
- HIRSCHKORN, PHIL & WALD, JONATHAN (2004), *Verdict in 9/11 Insurance Battle*, in «CNN», 30th April, Retrieved from <https://edition.cnn.com/2004/LAW/04/29/attacks.insurance/index.html> [accessed Dec 2023]
- HIRSHBEIN, LAURA (2010), *Sex and Gender in Psychiatry: A View From History*, in «Bioethics Quarterly», Vol. 31, No. 2 (Feb), pp. 155-70.
- HODGKISS, ANDREW (2000), *From Lesion to Metaphor: Chronic Pain in British, French and German Medical Writings, 1800–1914*, Clio Medica 58, Wellcome Institute Series in the History of Medicine, Amsterdam and Atlanta: Rodopi.
- HORGAN, JOHN (2012), *The Paradox of Karl Popper*, in «Scientific American», August 22nd. Retrived from: <https://www.scientificamerican.com/blog/cross-check/what-thomas-kuhn-really-thought-about-scientific-truth/> [Accessed Jan 2024]

HUSSERL, EDMUND (1991), *Collected Works*, vol. IV: *On the Phenomenology of the Consciousness of Internal Time (1893-1917)*, translated by John B. Brough, Dordrecht: Springer.

HUSSERL, EDMUND (2005), *Phantasy, Image, Consciousness and Memory (1898–1925)*, translated by John B. Brough, Dordrecht: Springer.

HYMAN, STEVEN E. (2010), *The Diagnosis of Mental Disorders: the Problem of Reification*, in «Annual Review of Clinical Psychology», Vol. 6, pp. 155–79. doi: 10.1146/annurev.clinpsy.3.022806.091532

ISRAËL, LUCIEN (1976), *L'Hystérique, le sexe et le médecin*, Paris: Masson.

JAMES, LIAM (2023), *First Baby with DNA from Three People Born in the UK*, in «The Independent», May 10th. Retrieved from <https://www.independent.co.uk/news/science/3-dna-baby-ivf-uk-b2335856.html> [Accessed Jan 2025]

JAMES, WILLIAM (1894), *Psychological Literature: Abnormal*, in «Psychological Review», Vol. 1, No. 2 (March), pp. 195-200.

JAMES, WILLIAM (1994) [1894], *The Physical Basis of Emotions*, in «Psychological Review», Vol. 101, No. 2, pp. 205-210.

JAMES, WILLIAM (2000) [1890], *The Principles of Psychology*, New York: Henry Holt & Company.

JANET, PIERRE (1887), *L'anesthésie systématisée et la dissociation des phénomènes psychologique*, in «Revue philosophique de la France et de l'Étranger», No. 23 (décembre), pp. 449-472.

JANET, PIERRE (1889), *L'automatisme psychologique*, Paris: Félix Arcan éditeur.

JANET, PIERRE (1904), *L'amnésie et la dissociation des souvenirs par l'émotion*, in «Journal de psychologie», première année, No. 5 (Sept.-Oct.), pp. 419-453.

JANET, PIERRE (1911), *L'état mental des hystériques*, Paris: Félix Alcan.

Janet, Pierre (1914), *Psychoanalysis*, in «Journal of Abnormal Psychology», No. 9 (1914-15), pp. 1–35, 153–87.

JANET, PIERRE (1920), *The Major Symptoms of Hysteria: Fifteen Lectures Given in the Medical School of Harvard University*, New York: The Macmillan Co.

JANET, PIERRE (1926), *De l'angoisse à l'extase. Etudes sur les croyances et les sentiments*, Paris: Félix Alcan.

JASPERS, KARL (1964) [1913], *General Psychopathology*, translated by J. Hoenig and Marian W. Hamilton, Chicago IL: University of Chicago Press. [*Allgemeine Psychopathologie*, Berlin: Springer]

JEFFERSON, ANNELI (2023), *Are Mental Disorders Brain Disorders? – A precis*, in «Philosophical Psychology», Jan, pp. 552-557.

doi: [10.1080/09515089.2023.2166822](https://doi.org/10.1080/09515089.2023.2166822)

JEONG, DOHYO et al. (2024), *Digital Mass Hysteria during Pandemic? A Study of Twitter Communication Patterns in the US during the Stages of COVID-19 Vaccination*, in «Behavioral Sciences», Vol. 14 No. 389 (May), pp. 1-13. doi: [10.3390/bs14050389](https://doi.org/10.3390/bs14050389)

JORDEN, EDWARD (1603), *A Briefe Discourse of a Disease called the Suffocation of the Mother*, London: Printed by John Windet, dwelling at the Signe of the Crosse Keyes at Powles Wharf. (digitalized by British Library, URL https://archive.org/details/bim_early-english-books-1475-1640_a-briefe-discourse-of-a-jorden-edward_1603)

KANDEL, ERIC R. (1998), *A New Intellectual Framework for Psychiatry*, in «American Journal of Psychiatry», Vol. 155, No. 4 (Apr), pp. 457-469. doi: [10.1176/ajp.155.4.457](https://doi.org/10.1176/ajp.155.4.457)

KAZI, FAROOQ & MUSHTAQ, AMMARA (2022), *Luc Montagnier*, in «The Lancet», Vol. 22, issue 4 (March/April), p. 458. doi: [10.1016/S1473-3099\(22\)00170-0](https://doi.org/10.1016/S1473-3099(22)00170-0)

KING, HELEN (2011), *Galen and the Widow. Towards a History of Therapeutic Masturbation in Ancient Gynaecology*, in «EuGeStA», No. 1, pp. 205-235.

KIRMAYER, LAURENCE J. (1986), *Somatization and the Social Construction of Illness Experience*, in S. McHugh et al. (eds.), *Illness Behaviour*, New York: Plenum Press, 111-133.

KIRMAYER, LAURENCE J. (2019), *Toward an Ecosocial Psychiatry*, in «World Social Psychiatry», Vol. 1, pp. 30-32.

KIRMAYER, LAURENCE J. & YOUNG, ALLAEN (1998), *Culture and Somatization: Clinical, Epidemiological, and Ethnographic Perspectives*, in «Psychosomatic Medicine», Vol. 60, No. 4, pp. 420–30.

KITCHER, PHILIP (1982), *Abusing Science: The Case Against Creationism*, Cambridge: MIT Press.

KITCHER, PHILIP (1993), *The Advancement of Science: Science without Legend, Objectivity without Illusions*, New York: Oxford University Press.

KLEIN, PETER (1998), *Concept of Knowledge*, in Edward Craig (ed.), *Routledge Encyclopedia of Philosophy*, Vol. 5, London-New York: Routledge, pp. 266-276.

KLEINMAN, ARTHUR (1977), *Depression, Somatization and the “New Cross-Cultural Psychiatry”*, in «Social Science & Medicine», Vol. 11, No. 1, pp. 3–10.

KLEINMAN, ARTHUR (1988), *The Illness Narratives: Suffering, Healing and the Human Condition*, New York: Basic Books.

- KLIGER, ROBYN (1994), *Somatization: Social Control and Illness Production in a Religious Cult*, in «Culture Medicine and Psychiatry», Vol. 18, No. 2, pp. 215-245. doi: [10.1007/BF01379450](https://doi.org/10.1007/BF01379450)
- KOTOV, ROMAN, et al. (2018), *A Paradigm Shift in Psychiatric Classification: the Hierarchical Taxonomy of Psychopathology (HiTOP)*, in «World Psychiatry», Vol. 17, pp. 24–25. doi: [10.1002/wps.20478](https://doi.org/10.1002/wps.20478)
- KRAEPELIN, EMIL (1968) [1904], *Lectures on Clinical Psychiatry*, translated by Thomas Johnstone, New York: Hafner.
- KRETSCHMER, ERNST (1960) [1923], *Hysteria, Reflex, and Instinct*, New York: Philosophical Library Inc.
- KUHN, THOMAS S. (1961), *The Function of Dogma in Scientific Research*, in A. C. Crombie (ed.) *Scientific Change, Symposium on the History of Science*, University of Oxford, July 9–15, New York-London: Basic Books, pp. 347–369.
- KUHN, THOMAS S. (1962), *The Structure of Scientific Revolutions*, Chicago IL: Chicago University Press.
- KUHN, THOMAS S. (1977), *The Essential Tension: Selected Studies in Scientific Tradition and Change*, Chicago IL: University of Chicago Press.
- KUHN, THOMAS S. (1987), *What are Scientific Revolutions?*, in L. Kruger et al (eds.), *The Probabilistic Revolution*, Cambridge MA: MIT Press, pp. 7-12, 19-21.
- KUHN, THOMAS S. (1994), *Afterwords*, in P. Horwich (ed.), *World Changes. Thomas Kuhn and the Nature of Science*, Cambridge MA: MIT Press, pp. 311-340.
- KUMAR, NARESH (2021), *Science versus Pseudoscience*, in «IJAEM», Vol. 3, No. 12 (Dec), pp. 1487-1501. doi: [10.35629/5252-031214871501](https://doi.org/10.35629/5252-031214871501)
- LACAN, JACQUES (1977), *Écrits. A Selection*, New York-London: Tavistock.
- LACAN, JACQUES (1981), *Le Séminaire. Livre III: Les psychoses (1955-1956)*, Paris: Éditions du Seuil.
- LACAN, JACQUES et al. (1987), *Joyce avec Lacan*, sous la direction de Jacques Aubert, Paris: Navarin.
- LACAN, JACQUES (2017) [1998], *The Formations of the Unconscious (Seminar V, 1957-1958)*, translated by Cormac Gallagher, Cambridge: Polity Press. [*Les formations de l'inconscient*, Paris: Seuil].
- LADYMAN, JAMES (2013), *Toward a Demarcation of Science from Pseudoscience*, in Pigliucci & Boudry (eds.) *Philosophy of Pseudoscience*, Chicago IL: University of Chicago Press, pp. 45-60. doi: [10.7208/chicago/9780226051826.003.0004](https://doi.org/10.7208/chicago/9780226051826.003.0004)
- LAING, RONALD D. & ESTERSON, AARON (1964), *Sanity, Madness and the Family*, London: Tavistock.
- LAKATOS, IMRE (1974), *Science and Pseudoscience*, in Vesey, G. (ed.), *Philosophy*

in the Open, Milton Keynes: Open University Press.

LAKATOS, IMRE (1976), *Falsification and the Methodology of Scientific Research Programmes*, in S.G. Harding (ed.), *Can Theories Be Refuted?*, Dordrecht: D. Reidel Publishing Company.

LAKATOS, IMRE (1978), *The Methodology of Scientific Research Programmes*, New York: Cambridge University Press.

LAKE, C. RAYMOND. (2012), *Schizophrenia is a Misdiagnosis. Implications for the DSM-5 and the ICD-11*, New York: Springer.

LAKOFF, GEORGE & JOHNSON, MARK (1980), *Metaphors We Live by*, Chicago IL: University of Chicago Press.

LARSEN, RASMUS R. et al. (2022), *More Phenomenology in Psychiatry? Applied Ontology as a Method Towards Integration*, in «The Lancet Psychiatry», Vol. 9, No. 9 (Sept), pp. 751-758.

LATOUR, BRUNO (1991), *Nous n'avons pas jamais été modernes*, Paris: Editions La Découverte.

LAUDAN, LARRY (1983), *The Demise of the Demarcation Problem*, in R.S. Cohen & L. Laudan (eds.), *Physics, Philosophy and Psychoanalysis*, Boston Studies in the Philosophy of Science, Vol. 76, Dordrecht: D. Reidel, pp. 111-127. doi: [10.1007/978-94-009-7055-7](https://doi.org/10.1007/978-94-009-7055-7)

LEBLANC, ANDRÉ (2001), *The Origins of the Concept of Dissociation: Paul Janet, His Nephew Pierre, and the Problem of Post-Hypnotic Suggestion*, in «History of Science», Vol. 39, No. 1, pp. 57-69.

LEFONS, FEDERICA (2008), *L'isterica e le altre: storia e attualità*, in «Psychofenia», Vol. XI, No. 18, pp. 173-202.

LEWANDOWSKY, STEPHAN, et al. (2019), *Influence and Seepage: an Evidence-Resistant Minority Can Affect Public Opinion and Scientific Belief Formation*, in «Cognition», Vol. 188 (July), pp. 124–139. doi: [10.1016/j.cognition.2019.01.011](https://doi.org/10.1016/j.cognition.2019.01.011)

LEWIS, AUBREY J. (1975), *The Survival of Hysteria*, in «Psychological Medicine», No. 5, pp. 9-12.

LEWIS, DAVID (1979), *Scorekeeping in a Language Game*, in «Journal of Philosophical Logic», Vol. 8, No. 3 (Jun), pp. 339-359.

LEWIS, DAVID (1996), *Elusive knowledge*, in «Australasian Journal of Philosophy», Vol. 74, No. 4, pp. 549-567.

LONGE, JACQUELINE (ed.) (2002), *Gale Encyclopedia Of Medicine*, second edition, Vol. 3, Drake Road Farmington Hills: Gale Group, Thomson Learning.

- LONGINO, HELEN E. (1990), *Science as Social Knowledge*, Princeton NJ: Princeton University Press.
- LONGINO, HELEN E. (2020), *Interaction: a Case for Ontological Pluralism*, in «Interdisciplinary Science Reviews», Vol. 45, No. 3, pp. 432-445. doi: [10.1080/03080188.2020.1794385](https://doi.org/10.1080/03080188.2020.1794385)
- LONGINO, HELEN E. (2022), *What's Social about Social Epistemology?*, in «Journal of Philosophy», Vol. 119, No. 4 (Apr), pp. 169-195, doi:[10.5840/jphil2022119413](https://doi.org/10.5840/jphil2022119413)
- LORENZ, KONRAD (1973), *Behind the Mirror: a Search for a Natural History of Human Knowledge*, New York: Harcourt Brace Jovanovich.
- LYOTARD, JEAN-FRANÇOIS (1984) [1979], *The Postmodern Condition: A Report on Knowledge*, translated by Geoff Bennington and Brian Massumi, Minneapolis MN: University of Minnesota Press. [*La Condition postmoderne: rapport sur le savoir*, Paris: Les Editions de Minuit]
- MAGGINI, CARLO (2015), *Il pregiudizio nel processo diagnostico e terapeutico in psichiatria*, in «Journal of Psychopathology», Vol. 21, pp. 23-29.
- MAGUIRE, ELEANOR A. et al. (2000), *Navigation-Related Structural Change in the Hippocampi of Taxi Drivers*, in «Proceedings of the National Academy of Sciences of the USA 97», pp. 4398–403. doi: [10.1073/pnas.070039597](https://doi.org/10.1073/pnas.070039597).
- MAGUIRE, ELEANOR A., KATHERINE WOOLLETT, AND HUGO J. SPIERS (2006), *London Taxi Drivers and Bus Drivers: A Structural MRI and Neuropsychological Analysis*, in «Hippocampus» No. 16, pp. 1091–101. doi: [10.1002/hipo.20233](https://doi.org/10.1002/hipo.20233)
- MAHNER, MARTIN (2013), *Science and Pseudoscience. How to Demarcate after the (Alleged) Demise of the Demarcation Problem*, in Pigliucci & Boudry (eds.) *Philosophy of Pseudoscience*, Chicago IL: University of Chicago Press, pp. 29-44.
- MALCOLM, JANET (1981), *Psychoanalysis, the Impossible Profession*, New York: Knopf.
- MANGANELLI, GIORGIO (2001) [1992], *Esperimento con l'India*, Milano: Adelphi.
- MARCEAU, JEAN-CLAUDE (2001), *Freud, Binswanger, Foucault: la psychanalyse à l'épreuve critique de la phénoménologie*, in «Cliniques méditerranéennes», No. 64, Vol 2, pp. 227-241. doi: [10.3917/cm.064.0227](https://doi.org/10.3917/cm.064.0227).
- MARCHIORI, DENISE (2004), *L'enigma "isteria"*, in «Leitmotiv», No. 4, pp. 171-193.
- MARTIN, EMILY (1991), *The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male-Female Roles*, in «Signs», Vol. 16, No. 3 (Spring), pp. 485-501.

- MARZOLA, PATRÍCIA et al. (2023), *Exploring the Role of Neuroplasticity in Development, Aging, and Neurodegeneration*, in «Brain Sciences», No. 13, p. 1610. <https://doi.org/10.3390/brainsci13121610>
- MASSIMI, MICHELA (2019), *Getting it right*, in «Aeon Essays», January 28th, Retrieved from <https://aeon.co/essays/its-time-for-a-robust-philosophical-defence-of-truth-in-science> (Accessed Jan 2025).
- MATHEW, RAMMYA (2020), *We Must Not Be Guided by Bad Science on Covid-19*, in «British Medical Journal», Vol. 369, art. 2241. doi: [10.1136/bmj.m2241](https://doi.org/10.1136/bmj.m2241)
- MAUSS, MARCEL (1935), *Les techniques du corps*, in «Journal de psychologie normal et pathologique», Année XXXII, pp. 271-93.
- MAYES, RICK & HORWITZ, ALLAN V. (2005), *DSM-III and the Revolution in the Classification of Mental Illness*, in «Journal of the History of Behavioral Sciences», Vol. 41, No. 3 (Summer), pp. 249-267.
- MCGINN, BERNARD (ed.) (1977), *Three Treatises on Man: A Cistercian Anthropology*, Kalamazoo: Cistercian Publications.
- MENGAL, PAUL (2003), *Melancolia erotica e histeria*, in «Eidos: Revista de Filosofía de la Universidad del Norte», No. 1 (agosto), pp. 110-127.
- MENGAL, PAUL (2021), *L'hystérie au XIXe siècle*, in «Soins. Psychiatrie», Vol. 42, No. 335 (Jul-Aug), pp. 30-32. doi: [10.1016/j.spsy.2021.05.007](https://doi.org/10.1016/j.spsy.2021.05.007).
- MERLEAU-PONTY, MAURICE (2012) [1945], *Phenomenology of Perception*, translated by Donald A. Landes, New York: Routledge. [*Phénoménologie de la perception*, Paris: Gallimard]
- MERSKEY, HAROLD (1985), *Hysteria: The History of a Disease: Ilza Veith*, in «British Journal of Psychiatry» Vol. 147, No. 5, pp. 576-579. doi: [10.1192/S0007125000208519](https://doi.org/10.1192/S0007125000208519)
- MICALE, MARK S. (1990), *Charcot and the Idea of Hysteria in the Male: Gender, Mental Science, and Medical Diagnosis in Late Nineteenth-century France*, in «Medical History», Vol. 34, No. 4 (Oct), pp. 363-411. doi: [10.1017/s0025727300052777](https://doi.org/10.1017/s0025727300052777)
- MICALE, MARK S. (1993), *On the "Disappearance" of Hysteria: A Study in the Clinical Deconstruction of a Diagnosis*, in «Isis», Vol. 84, No. 3 (Sept.), pp. 496-526. doi: [10.1086/356549](https://doi.org/10.1086/356549)
- MOBERGER, VICTOR (2020), *Bullshit, Pseudoscience and Pseudophilosophy*, in «THEORIA», No. 86, pp. 595–611. doi: [10.1111/theo.12271](https://doi.org/10.1111/theo.12271)
- MOI, TORIL (1981), *Representation of Patriarchy: Sexuality and Epistemology in Freud's Dora*, in «Feminist Review», No. 9 (Oct), pp. 60-74.

- MONCRIEFF, JOANNA (2006), *Psychiatric Drug Promotion and the Politics of Neoliberalism*, in «British Journal of Psychiatry» No. 188, pp. 301–2. <https://doi.org/10.1192/bjp.188.4.301>.
- MONCRIEFF, JOANNA et al. (2023), *The Serotonin Theory of Depression: A Systematic Umbrella Review of the Evidence*, in «Molecular Psychiatry», No. 28, pp. 3243–56. <https://doi.org/10.1038/s41380-022-01661-0>
- MORRIS, HENRY & CLARK, MARTIN (1976), *The Bible Has the Answer*, Green Forest: Master Books.
- NICKLES, THOMAS (2013), *The Problem of Demarcation. History and Future*, in Pigliucci & Boudry (eds.) *Philosophy of Pseudoscience*, Chicago IL: University of Chicago Press, pp. 101-120. doi: [10.7208/chicago/9780226051826.003.0007](https://doi.org/10.7208/chicago/9780226051826.003.0007)
- NIETZSCHE, FRIEDRICH (1994), *On the Genealogy of Morality*, translated by Carol Diethe, New York: Cambridge University Press.
- NORTH, CAROL S. (2015), *The Classification of Hysteria and Related Disorders: Historical and Phenomenological Considerations*, in «Behavioral Sciences», Vol. 5, No. 4, (Dec), pp. 496-517. doi: [10.3390/bs5040496](https://doi.org/10.3390/bs5040496)
- NORTHOFF, GEORG, JONAS DAUB, AND DUSAN HIRJAK (2023), *Overcoming the Translational Crisis of Contemporary Psychiatry—Converging Phenomenological and Spatiotemporal Psychopathology*, in «Molecular Psychiatry», No. 28, pp. 4492–99. <https://doi.org/10.1038/s41380-023-02245-2>
- NOZICK, ROBERT (1981), *Philosophical Explanations*, Cambridge MA: Harvard University Press.
- OKRUHLIK, KATHLEEN (1994), *Gender and the Biological Sciences*, in «Canadian Journal of Philosophy», No. 20 (Jan), pp. 21-42.
- OLIVER, JEFFREY (2006), *The Myth of Thomas Szasz*, in «The New Atlantis», No. 13 (Summer), pp. 68-84.
- OLIVIER DE SARDAN, JEAN-PIERRE (1994), *Possession affliction et folie: les ruses de la thérapisation*, in «L'Homme», Tome 34, No. 131, pp. 7-27.
- ONG, AIHWA (1988), *The Production of Possession: Spirits and the Multinational Corporation in Malaysia*, in «American Ethnologist», Vol. 15, No. 1 (Feb), pp. 28-42.
- OYEBODE, FEMI (2015), *Sims' Symptoms in the Mind*, Fifth Edition, London: Elsevier-Saunders Ltd.
- PALANO, DAMIANO (2002), *Il potere della moltitudine*, Milano: Vita e Pensiero.
- PAVLOV, IVAN P. (1921), *Psychopathology and Psychiatry*, translated by D. Myshne and S. Belsky, Moscow: Foreign Languages Publishing House.
- PAVLOV, IVAN P. (1928), *Lectures on Conditioned Reflexes*, translated by Horsley Gantt, New York: Liveright Publishing.

- PEARCE, BARNETT W. (1989), *Communication and the Human Condition*, Carbondale IL: Southern Illinois University.
- PEARCE, BARNETT W. (1994), *Interpersonal communication: Making Social Worlds*, New York: HarperCollins.
- PEARCE, BARNETT W. & CRONEN, VERNON E. (1980), *Communication, Action, and Meaning: The Creation of Social Realities*, New York: Praeger.
- PEARCE, JOHN M.S. (2014), *Hysteria Before Charcot*, in Bogousslavsky J. (ed.), *Hysteria: The Rise of an Enigma*, Basel: Karger, pp. 1-11.
- PEARCE, JOHN M.S. (2016), *Sydenham on Hysteria*, in «European Neurology», Vol. 76, No. 3-4 (Oct), pp. 175-181.
- PENROSE, ROGER (2020), *Physics of Consciousness and the Infinite Universe*, Interview by Lex Fridman. Youtube, Podcast #85, March 31st, 1:27:56. <https://www.youtube.com/watch?v=orMtwOz6Db0>
- PERSSON, ULF (2015), *Is Falsification Falsifiable?*, in «Foundations of Science», Vol. 21, No. 3, pp. 461-75.
- PESSOTTI, ISAIAS (1994), *Aloucura e as épocas*, Rio de Janeiro: Editora 34.
- PIGLIUCCI, MASSIMO & BOUDRY, MAARTEN (eds.) (2013), *Philosophy of Pseudoscience*, Chicago IL: University of Chicago Press.
- PINEL, PHILIPPE (2008) [1801], *Medico-Philosophical Treatise on Mental Alienation*, translated by Hickish G., Healy D. and Charland L.C., Oxford: Wiley-Blackwell. [*Traité médico-philosophique sur la manie, ou l'aliénation mentale*, Paris: Caille et Ravier]
- PIROSCA, STEFANIA et al. (2022), *Tolerating Bad Health Research: The Continuing Scandal*, in «Trials», Vol. 23, Art. 458. doi: [10.1186/s13063-022-06415-5](https://doi.org/10.1186/s13063-022-06415-5)
- PIZARRO JARAMILLO, JERÓNIMO (2004), *De la histeria a la neurastenia (Quental y Pessoa)*, in «Literatura: teoría, historia, crítica», No. 6, pp. 221-233.
- PLATO (1997), *Complete Works*, edited by John M. Cooper, Indianapolis-Cambridge: Hackett.
- POLLAN, MICHAEL (2018), *How to Change Your Mind*, New York: Penguin Press.
- POPPER, KARL (1959) [1934], *The Logic of Scientific Discovery*, London: Hutchinson & Co. [*Logik der Forschung*, Wien: Verlag von Julius Springer]
- POPPER, KARL (1962), *Conjectures and Refutations*, London-New York: Basic Books.
- POPPER, KARL (1976), *Unended Quest*, London: Fontana.
- POPPER, KARL (1994), *The Myth of Framework*, London-New York: Routledge.
- QUINE, WILLARD VAN ORMAN (1953), *From a Logical Point of View*, Cambridge MA: Harvard University Press.

QUINE, WILLARD VAN ORMAN (1960), *Word and Object*, Cambridge MA: MIT Press.

RASHED, MOHAMMED A. (2019), *In Defense of Madness: The Problem of Disability*, in «The Journal of Medicine and Philosophy: A Forum for Bioethics and Philosophy of Medicine», Vol. 44, No. 2 (Apr), pp. 150-174, doi: [10.1093/jmp/jhy016](https://doi.org/10.1093/jmp/jhy016).

REISCH, GEORGE A. (1998), *Pluralism, Logical Empiricism, and the Problem of Pseudoscience*, in «Philosophy of Science», Vol. 65, No. 2, pp. 333-348. doi: [10.1086/392642](https://doi.org/10.1086/392642)

REPNIKOV, GEORG (2023), *Does Schizophrenia Exist? A Deflationary Perspective*, in «Philosophy of Medicine», Vol. 4, No. 1, pp. 1-24. doi: [10.5195/pom.2023.15](https://doi.org/10.5195/pom.2023.15)

RESNIK, DAVID B. (2000), *A Pragmatic Approach to the Demarcation Problem*, in «Studies in History and Philosophy of Science Part A», Vol. 31, No. 2, pp. 249–267. doi: [10.1016/S0039-3681\(00\)00004-2](https://doi.org/10.1016/S0039-3681(00)00004-2)

REYNOLDS, ANDREW S. (2022), *Understanding Metaphors in the Life Sciences*, Cambridge MA: Cambridge University Press. doi: [10.1017/9781108938778](https://doi.org/10.1017/9781108938778)

REYNOLDS, EDWARD H. (2012), *Hysteria, Conversion and Functional Disorders: a Neurological Contribution to Classification Issues*, in «The British Journal of Psychiatry», Vol. 201, No. 4, pp. 253–254. doi: [10.1192/bjp.bp.111.107219](https://doi.org/10.1192/bjp.bp.111.107219)

REYNOLDS, EDWARD H. (2018), *Hysteria in Ancient Civilisations: A Neurological Review*, in «Journal of the Neurological Sciences», Vol. 388, No. 15 (May), pp. 208-213, doi: [10.1016/j.jns.2018.02.024](https://doi.org/10.1016/j.jns.2018.02.024)

RICOEUR, PAUL (1965), *De l'interprétation. Essai sur Freud*, Paris: Editions du Seuil.

RIVALLAN, ARMEL (2021), *L'hystérie, une question sociétale*, in «Soins. Psychiatrie», Vol. 42, No. 335, (Jul-Aug), pp. 11-36. doi: [10.1016/j.spsy.2021.05.002](https://doi.org/10.1016/j.spsy.2021.05.002)

ROSE, JACQUELINE (2020), *Sexuality in the Field of Vision*, London: Verso.

ROWBOTTOM, DARRELL PATRICK (2011), *Kuhn vs Popper on Criticism and Dogmatism in Science: A resolution at the Group Level*, in «Studies in History and Philosophy of Science», Vol. 42, No. 1, pp. 117-124.

RUSSELL, BERTRAND (1927), *An Outline of Philosophy*, London: George Allen & Unwin.

SCHIFFER, STEPHEN (1996), *Contextualist Solutions to Skepticism*, in «Proceedings of the Aristotelian Society», No. 96, pp. 317-333.

SCHIPANI, VANESSA (2017), *Scientific Evidence and the EU Court*, in «FactCheck», July 3rd. Retrived from <https://www.factcheck.org/2017/07/scientific-evidence-eu-court/> [Accessed Jan 2025]

SCHOPENHAUER, ARTHUR (2019) [1818]. *The World as Will and Representation*, David Carus and Richard E. Aquila, 2 vols., London-New York: Routledge.

- SCULL, ANDREW (2009), *Hysteria: The Biography*, New York: Oxford University Press.
- SCULL, ANDREW (2011), *The Disturbing History of Hysteria*, New York: Oxford University Press.
- SEALE-FELDMAN, AIDAN (2019), *Relational Affliction: Reconceptualizing "Mass Hysteria"*, in «ETHOS», Vol. 47, No. 3, pp. 307–325. doi: [10.1111/etho.12245](https://doi.org/10.1111/etho.12245)
- SEALE-FELDMAN, AIDAN (2022), *The Possibility of Translation: Turning Ghosts into Psychosomatic Disorders in Nepal*, in «South Asia: Journal of South Asian Studies», Vol. 45, No. 1, pp. 1-16. doi: [10.1080/00856401.2022.2014156](https://doi.org/10.1080/00856401.2022.2014156)
- SELTZER, ALLAN (1994), *Multiple Personality: a Psychiatric Misadventure*, in «Canadian Journal of Psychiatry», Vol. 39. (Sept.), pp. 442-445.
- SENECA, LUCIUS ANNAEUS (2015), *Letters On Ethics To Lucilius*, translated with an introduction and commentary by Margaret Graver and A.A. Long, London-Chicago: The University of Chicago Press.
- SHAPIRO, LISA (1999), *Princess Elizabeth and Descartes: The Union of Soul and Body and the Practice of Philosophy*, in «British Journal for the History of Philosophy», No. 7, pp. 503–20. <https://doi.org/10.1080/09608789908571042>
- SHELDRAKE, RUPERT (2012), *The Science Delusion*, London: Hodder & Stoughton.
- SHERMER, MICHAEL (2013), *Science and Pseudoscience: The Difference in Practice and the Difference It Makes*, in M. Pigliucci & M. Boudry (eds.) *Philosophy of Pseudoscience*, Chicago IL: The University of Chicago Press, pp. 203–223. doi: [10.7208/chicago/9780226051826.003.0012](https://doi.org/10.7208/chicago/9780226051826.003.0012)
- SHORTER, EDWARD (2005), *A Historical Dictionary of Psychiatry*, Oxford NY: Oxford University Press.
- SHOWALER, ELAINE (1987), *The Female Malady: Women, Madness and English Culture 1830-1980*, London: Viriago Press.
- SHOWALER, ELAINE (1997), *Hystories, Hysterical Epidemics and Modern Culture*, London: Picador.
- SILBERZAHN, RAPHAEL et al. (2018), *Many Analysts, One Data Set: Making Transparent How Variations in Analytic Choices Affect Results*, in «Advances in Methods and Practices in Psychological Science», Vol. 1, No. 3 (Sept): pp. 337-356. doi: [10.1177/2515245917747646](https://doi.org/10.1177/2515245917747646)
- SINGH, SWAERAN P., & LEE, ALAN S. (1992), *Declining Incidence of Hysteria*, in «The British Journal of Psychiatry», No. 161, p. 276, doi: [10.1192/bjp.161.2.276a](https://doi.org/10.1192/bjp.161.2.276a)
- SLATER, ELIOT (1965), *Diagnosis of Hysteria*, in «British Medical Journal», Vol. 1, No. 5447 (May), pp. 1395-1399.
- SOLER, COLETTE (2008), *Du parlêtre*, in «L'en-je lacanien», Vol. 11, No. 2, pp. 23-33. doi: [10.3917/enje.011.0023](https://doi.org/10.3917/enje.011.0023)

SONTAG, SUSAN (1978), *Illness as Metaphor*, New York: Farrar, Straus and Giroux.

SOSA, ERNEST (1988), *Knowledge in Context, Skepticism in Doubt: The Virtue of Our Faculties*, in «Philosophical Perspectives», No. 2, Epistemology, pp. 139-155.

SOSA, ERNEST (1999), *How To Defeat Opposition to Moore*, in J. Tomberli (ed.), in «Noûs», Vol. 33, Supplement: Philosophical Perspectives, 13, Epistemology, pp. 141-153.

STEELE, ROBERT S. (1979), *Psychoanalysis and Hermeneutics*, in «International Review of Psycho-Analysis», No. 6, pp. 389-411.

SUTKER, PATRICIA S., & ADAMS, HENRY E. (2001), *Comprehensive Handbook of Psychopathology*, Dordrecht: Kluwer Academic Publishers.

SWAIN, GLADYS (1977), *Le sujet de la folie. Naissance de la psychiatrie*, Toulouse: Privat.

SYDENHAM, THOMAS (1729) [1696], *The Whole Works of that Excellent Practical Physician, Dr. Thomas Sydenham*, corrected from the original Latin by John Pechey, 9th edition, London: Printed for J. Darby.

SZASZ, THOMAS (1960), *The Myth of Mental Illness*, in «American Psychologist», No. 15 (Feb), pp. 113-118.

SZASZ, THOMAS (1974) [1961], *The Myth of Mental Illness. Foundations of a Theory of Personal Conduct*, revised edition, New York: Harper Paperback.

SZASZ, THOMAS (2008), *Psychiatry: the Science of Lies*, Syracuse NY: Syracuse University Press.

SZASZ, THOMAS (2010), *DSM: The Nosology of Nondiseases*, in «Bulletin of the Association for the Advancement of Philosophy and Psychiatry», Vol. 17, No. 2, pp. 7-8.

SZASZ, THOMAS (2011), *The Myth of Mental Illness, 50 years later*, in «The Psychiatrist», Vol. 35, No. 5 (May), pp. 179-182, doi: [10.1192/pb.bp.110.031310](https://doi.org/10.1192/pb.bp.110.031310)

TASCA, CECILIA et al. (2012), *Women And Hysteria In The History Of Mental Health*, in «Clinical Practice & Epidemiology in Mental Health», 8, pp. 110-119.

TAUSSIG, MICHAEL (1980), *Reification and the Consciousness of the Patient*, in «Social Science and Medicine», Part B: Medical Anthropology, Vol. 14B, No. 1 (Feb), pp. 3-13, doi: [10.1016/0160-7987\(80\)90035-6](https://doi.org/10.1016/0160-7987(80)90035-6)

TAYLOR, MICHAEL A. (2013), *Hippocrates Cried: The Decline of American Psychiatry*, New York: Oxford University Press.

TEIXEIRA, PEDRO M. (2015), *DSM I, II, III, IV, 5 (1952 - 2013)*, in «Revista Portuguesa de Medicina Geral e Familiar», No. 31, pp. 164-5.

THURS, DANIEL P. & NUMBERS, RONALD L. (2013), *Science, Pseudoscience, and Science Falsely So-Called*, in M. Pigliucci & M. Boudry (eds.) *Philosophy of*

- Pseudoscience*, Chicago IL: The University of Chicago Press, pp. 121–144. doi: [10.7208/chicago/9780226051826.003.0008](https://doi.org/10.7208/chicago/9780226051826.003.0008)
- TOGNAZZI, GIADA (2008), *La concezione biologica della donna nel Corpus Hippocraticum: dalla teoria alla terapia*, in «Genre & Histoire», 2 (Printemps) accessed on April 7th, 2026. url: <http://journals.openedition.org/genrehistoire/331>.
- TONUS, ANTÓNIA & MESSAS, GUILHERME (2018), *Ludwig Binswanger: the Construction of an Epistemological Foundation for Psychiatry*, in «Circumscribere», No. 22, pp. 36–49. doi:[10.23925/1980-7651.2018v22;p36-49](https://doi.org/10.23925/1980-7651.2018v22;p36-49)
- UREÑA, JOSÉ MANUEL & TERCEDOR, MARIBEL (2011), *Situated Metaphor in Scientific Discourse: An English-Spanish Contrastive Study*, in «Languages in Contrast», Vol. 11, No. 2 (Jan), pp. 216 - 240. doi: <https://doi.org/10.1075/lic.11.2.04ure>
- VAN DER HART, ONNO, & HORST, RUTGER (1989), *The Dissociation Theory of Pierre Janet*, in «Journal of Traumatic Stress», Vol. 2, No. 4, pp. 1-11.
- VAN OS, JIM (2010), *Are Psychiatric Diagnoses of Psychosis Scientific and Useful? The Case of Schizophrenia*, in «Journal of Mental Health», Vol. 19, pp. 305–317. doi: [10.3109/09638237.2010.492417](https://doi.org/10.3109/09638237.2010.492417)
- VAN OS, JIM (2016), “Schizophrenia” Does Not Exist, in *British Medical Journal*, Vol. 352, i:375; doi: [10.1136/bmj.i375](https://doi.org/10.1136/bmj.i375)
- VEITH, ILZA (1965), *Hysteria: The History of a Disease*, Chicago IL: University of Chicago Press.
- VENTURINHA, NUNO (2018), *Description of Situations: an Essay in Contextualist Epistemology*, Cham: Springer.
- VICKERS, JULIA (2008), *Lou von Salomé: A Biography of the Woman who Inspired Freud, Nietzsche and Rilke*, Jefferson NC: McFarland.
- VOGEL, JONATHAN (1990), *Are There Counterexamples to the Closure Principle?*, in M. Roth and G. Ross (eds.), *Doubting: Contemporary Perspectives on Skepticism*, Dordrecht: Kluwer, pp. 13-28.
- VOGEL, JONATHAN (1999), *The New Relevant Alternatives Theory*, in «Philosophical Perspectives» 13, Epistemology, pp. 155-180.
- WADE, DERICK (2006), *Why Physical Medicine, Physical Disability and Physical Rehabilitation? We Should Abandon Cartesian Dualism*, in «Clinical Rehabilitation», Vol. 20, No. 3 (Mar), pp. 185-90. doi: [10.1191/0269215506cr952ed](https://doi.org/10.1191/0269215506cr952ed). PMID: 16634337
- WADE, DERICK, & HALLIGAN, PETER (2017), *The Biopsychosocial Model of Illness: a Model Whose Time has Come*, in «Clinical Rehabilitation», Vol. 31, No. 8, pp. 995-1004. doi: [10.1177/0269215517709890](https://doi.org/10.1177/0269215517709890)

- WALSCHÉ, FRANCIS (1965), *Diagnosis of Hysteria*, in «British Medical Journal», Vol. 2, No. 5476 (Dec), pp. 1451-1454.
- WALUSINSKI, OLIVIER (2013), *Hysteria in fin de siècle French Novels*, in «Frontiers of Neurology and Neuroscience», No. 31, pp. 35-43. doi: [10.1159/000343250](https://doi.org/10.1159/000343250)
- WEBSTER, MOLLY (2014), *Goo and You*, New York: Radiolab WNYC Studios Podcasts. <http://www.wnycstudios.org/story/goo-and-you/> (accessed on January 15th, 2026).
- WEBSTER, MOLLY (2025), *Signal Hill: Caterpillar Roadshow*, New York: Radiolab WNYC Studios Podcasts. <http://www.wnycstudios.org/story/signal-hill-caterpillar-roadshow/> (accessed on January 15th, 2026).
- WEISBERG, MICHAEL (2013), *Simulation and Similarity: Using Models to Understand the World*, New York: Oxford University Press. doi: [10.1093/acprof:oso/9780199933662.001.0001](https://doi.org/10.1093/acprof:oso/9780199933662.001.0001)
- WEISBERG, MICHAEL, & PAUL, DIANE B. (2016), *Morton, Gould, and Bias: A Comment on “The Mismeasure of Science”*, in «PLoS Biology», Vol. 14, No. 4, e1002444. doi: [10.1371/journal.pbio.1002444](https://doi.org/10.1371/journal.pbio.1002444)
- WELBOURNE, MICHAEL (1979), *The Transmission of Knowledge*, in «Philosophical Quarterly», Vol. 29, No. 114, pp. 1-9.
- WHITE, ERINA (2014), *Science, Pseudoscience, and the Frontline Practitioner: The Vaccination/Autism Debate*, in «Journal of Evidence-Informed Social Work», Vol. 11, No. 3, pp. 269–74. doi: [10.1080/15433714.2012.759470](https://doi.org/10.1080/15433714.2012.759470)
- WHITEHEAD, CLAY C. (2005), *Toward a ‘New’ Paradigm of Therapeutic Action: Neuropsychoanalysis and Downward Causation*, in «Journal of The American Academy of Psychoanalysis and Dynamic Psychiatry», No. 33, pp. 637–56. doi: [10.1521/jaap.2005.33.4.637](https://doi.org/10.1521/jaap.2005.33.4.637).
- WILDE, OSCAR (1906), *Phrases and Philosophies for the Use of the Young*. London: L. Smithers.
- WITTGENSTEIN, LUDWIG (1922), *Tractatus Logico-Philosophicus*, New York: Harcour, Brace & Company.
- WITTGENSTEIN, LUDWIG (1958), *Philosophical Investigations*, translated by G.E.M.Anscombe, Oxford: Basil Blackwell & Mott.
- WITTGENSTEIN, LUDWIG (1969), *On Certainty*, translated by Denis Paul and G.E.M.Anscombe, New York: Harper & Row.
- WOLPUTTE, STEVEN VAN (2004), *Hang on to Your Self: Of Bodies, Embodiment, and Selves*, in «Annual Review of Anthropology», Vol. 33, No. 1, pp. 251–269. doi: [10.1146/annurev.anthro.33.070203.143749](https://doi.org/10.1146/annurev.anthro.33.070203.143749)
- WOOD, ALLEN W. (2006), *Fichte’s Intersubjective I*, in «Inquiry», No. 49, pp. 62–79.
- WOOLF, VIRGINIA (2012) [1926], *On Being Ill*, Ashfield MA: Paris Press.

ZHAO, GANG et al. (2021), *Mass Hysteria Attack Rates in Children and Adolescents: a Meta-Analysis*, in «Journal of International Medical Research», Vol. 49, No. 12.
doi: [10.1177/03000605211039812](https://doi.org/10.1177/03000605211039812)

ŽIŽEK, SLAVOJ (2000), *Beyond Identification*, in Silvia Eiblmayr et al., *Die verletzte Diva*, München: Oktagon, pp. 145-153.