Psychiatric nosological historiography - Part I: until the raising and fall of the psychodynamic theory

Historiografia nosológica psiquiátrica - Parte I: até a ascensão e queda da teoria psicodinâmica

Historiografía nosológica psiquiátrica - Parte I: hasta el ascenso y caída de la teoría psicodinámica

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ABSTRACT:
Introduction: The history of psychiatry encompasses the evolving concepts about the relationship between body and mind and also of the definition of normality, which depend on the knowledge and customs of different times and places. For a better understanding of this journey, this study privileged the presentation of the influential figures on the construction of psychiatric nosology and classifications mainly unfolded on a descriptive or causal basis, from psychics or somatics driving, since the western renaissance. Because of the length of this historical path, this study is divided into two parts. This paper, the first in a two-part series, is a preamble to the development of the new nosography and psychopharmacology of the 21st century, merit of the second paper in this series. Method: Narrative review based on secondary sources. Results: Part One includes a review of prior studies concluding that the psychiatric nosography construction has many stations and it passes through the 18th century more structured morbid classifications based on taxonomies of the natural sciences. Psychiatric classifications navigate the course between different psychiatric theories, often marked by inherent prejudices, alongside advances achieved in neuroscience and its intricate connections with the physiology of emotions, cognition and behaviors, shedding light on their deviations or disorders. This evolution goes in parallel with that of the macro and microanatomy, physiology, chemistry, pharmacology, genetics, internal medicine, mainly neurology, apace with evaluation
psychiatric nosological historiography - Part I

Techniques that also reach the blood-oxygen-level-dependent imaging (BOLD) fMRI (functional magnetic resonance imaging) that indirectly study the action of neurotransmitters and neuronal signalling. The biologic approach stands in contrast to the psychodynamic theory, particularly dominant until roughly the mid-20th century. Conclusion: The study of psychiatric nosohistoriography helps to understand the conceptual evolution of mental illnesses and the most recent importance of psychopharmacology for this.

Keywords: classification, psychiatry, psychopharmacology, neurosciences, nosology, taxonomy, history of medicine

RESUMO:
Introdução: A história da psiquiatria abrange a evolução dos conceitos sobre a relação entre corpo e mente e também da definição de normalidade, que dependem dos conhecimentos e costumes de diferentes épocas e lugares. Para uma melhor compreensão deste percurso, este estudo privilegiou a apresentação das figuras influentes na construção da nosologia e das classificações psiquiátricas desdobradas sobretudo numa base descritiva ou causal, desde a condução psíquica ou somática, desde o Renascimento ocidental. Devido à extensão deste percurso histórico, este estudo está dividido em duas partes. Este artigo, o primeiro de uma série de duas partes, é um preâmbulo ao desenvolvimento da nova nosografia e psicofarmacologia do século XXI, mérito do segundo artigo desta série. Método: Revisão narrativa baseada em fontes secundárias. Resultados: A primeira parte inclui uma revisão de estudos anteriores concluindo que a construção da nosografia psiquiátrica tem muitas estações e passa ao longo do século XVIII por classificações mórbidas mais estruturadas baseadas em taxonomias das ciências naturais. As classificações psiquiátricas navegam no percurso entre diferentes teorias psiquiátricas, muitas vezes marcadas por preconceitos inerentes, ao lado dos avanços alcançados na neurociência e nas suas intrincadas conexões com a fisiologia das emoções, da cognição e dos comportamentos, lançando luz sobre os seus desvios ou distúrbios. Esta evolução caminha paralelamente à da macro e microanatomia, fisiologia, química, farmacologia, genética, medicina interna, principalmente neurologia, acompanhada de técnicas de avaliação que também alcançam a imagem dependente do nível de oxigênio no sangue (BOLD) fMRI (magnética funcional). ressonância magnética) que estudam indiretamente a ação dos neurotransmissores e da sinalização neuronal. A abordagem biológica contrasta com a teoria
psicodinâmica, particularmente dominante até aproximadamente meados do século XX. Conclusão: O estudo da nosohistoriografia psiquiátrica ajuda a compreender a evolução conceptual das doenças mentais e a importância mais recente da psicofarmacologia para esta.

Palavras-chave: classificação, psiquiatria, psicofarmacologia, neurociências, nosologia, taxonomia, história da medicina

RESUMEN:
Introducción: La historia de la psiquiatría abarca la evolución de conceptos sobre la relación entre cuerpo y mente y también de la definición de normalidad, que dependen de los conocimientos y costumbres de diferentes épocas y lugares. Para una mejor comprensión de este recorrido, este estudio privilegió la presentación de figuras influyentes en la construcción de la nosología psiquiátrica y de clasificaciones desplegadas principalmente sobre bases descriptivas o causales, desde la conducción psíquica o somática, desde el renacimiento occidental. Debido a la longitud de este recorrido histórico, este estudio se divide en dos partes. Este artículo, el primero de una serie de dos partes, es un preámbulo del desarrollo de la nueva nosografía y psicofarmacología del siglo XXI, mérito del segundo artículo de esta serie. Método: Revisión narrativa basada en fuentes secundarias. Resultados: La Primera Parte incluye una revisión de estudios previos concluyendo que la construcción de la nosografía psiquiátrica tiene muchas estaciones y pasa por clasificaciones morbosas más estructuradas del siglo XVIII basadas en taxonomías de las ciencias naturales. Las clasificaciones psiquiátricas navegan entre diferentes teorías psiquiátricas, a menudo marcadas por prejuicios inherentes, junto con los avances logrados en la neurociencia y sus intrincadas conexiones con la fisiología de las emociones, la cognición y los comportamientos, arrojando luz sobre sus desviaciones o trastornos. Esta evolución va en paralelo a la de la macro y microanatomía, la fisiología, la química, la farmacología, la genética, la medicina interna, principalmente la neurología, a la par de técnicas de evaluación que también alcanzan la resonancia magnética funcional (BOLD) de imágenes dependientes del nivel de oxígeno en la sangre (BOLD). resonancia magnética) que estudian indirectamente la acción de los neurotransmisores y la señalización neuronal. El enfoque biológico contrasta con la teoría psicodinámica, particularmente dominante hasta aproximadamente mediados del siglo XX. Conclusión: El estudio de la nosohistoriografía psiquiátrica ayuda a comprender la evolución conceptual de las enfermedades mentales y la importancia más reciente de la psicofarmacología para ésta.
Introduction
The construction of human knowledge about mental illness reaches a distant past, to be covered in this article by exposing some landmarks of psychiatry reflected on its nosography, including underneath neurosciences subtract and proximity to neurology. However, the diagnostic path in psychiatry is even more difficult than in the rest of medicine as a whole and in particular, than in neurology, as disturbances in cognition, behavior and emotions are much more complex and difficult to evaluate and define their boundaries and etiological basis. This challenging journey may encompass a matter of value judgments of what would be socially normal, of objective evaluation or of a mixture of scientific facts and value judgments that may change over time.

Some of the most influential physicians in psychiatric nosography are also highlighted as shown in Figure 1 and throughout the text. The same was done regarding the main influential book/concepts on modern mental disorders classification presented in Figure 2 which demonstrate the successive influence waves of the British, French, German and American
Schools of psychiatry, besides universal collegiate orchestration conducted by the World Health Organization (WHO).

This article presents the history of psychiatry from Ancient History to the Enlightenment, but mainly from the 19th and early 20th centuries, reaching the time of the new psychopharmacology and consequent preparation for the 21st century within the core of psychiatric nosography. This brings us to the last stage accomplished in this work on its current state and perspectives, which is presented in the second and last articles of this series.

From ancient history to the enlightenment
In the history of conceptions about mental illness, there are the main conceptions about its supernatural, somatogenic or psychogenic nature, all influential in its diagnosis, classification and treatment. To begin within the classical era, Greek physicians rejected supernatural explanations of mental disorders, and Hippocrates (460-370 BC) attempted to separate superstition and religion from medicine through his enduring humorism, a somatogenic theory influential until the 19th century which was reinforced by the Roman Galen. Thus, somatogenic theories identify disturbances in physical functioning determined by genetic inheritance or damage with consequent brain imbalance. In addition, psychogenic theories have focused on traumatic or stressful experiences, associations, and maladaptive learned cognitions or distorted perceptions. However, in the Middle Ages of Europe, supernatural theories again prevailed, and their apogee came with two Dominican monks, authors of the *Malleus Maleficarum* (1486) to guide the witch hunt that lasted until the 17th and 18th centuries. Alongside this history, hospitals and asylums were established from the 16th century onwards to receive people not only the supposedly mentally ill, but also indistinctly divergent people as eccentric, nonconformist, and indigent.

The best known of these health centers were Bethlem Hospital in London and the Hôpital Général in Paris - which included La Bicêtre and the Salpêtrière. In these places, the approach was mainly somatogenic, with similar treatments for physical ailments, which included purging, bleeding and emetics [1].

Consequently, medical treatises had a variety of different ways of classifying and grouping illnesses, with the oldest categorizing illnesses by the parts of the body that were supposed to be affected. An enduring
classification of diseases on a humoral basis (blood, yellow bile, black bile, and phlegm) persisted from classical Greco-Roman times through the medieval times and European Renaissance when there were also occasional suggestions that evil external influences could cause illness or death. Consequently, classification systems underwent very little development until the Renaissance with the first attempts to develop more comprehensive disease classification approaches, coincidentally with Jean François Fernel (1497-1558), who embodied the humanist spirit of that period, but still within the humoral medicine of his time. He published medicine (1554) which begins with Physiology as well as Pathology, both terms coined by him. This leads to the systematic analysis of diseases and their location, the book also includes therapy. In the preface to the Physiology, the science of the functions of the body, he made a further observation, as reported by Cordier [2] of the need for the physician to initially know the nature of the complete human body in all its parts, physiology being the discourse of human nature, of all their faculties and functions, being the pathology, the discourse of diseases and infirmities and what are their causes and signs; and the prognosis. Fernel also dedicates an important part to the physiology of the soul 'The knowledge of the soul is very obscure and difficult...it must be considered the soul because it is the perfection of the whole'. As Cordier [2] questions, despite the progress of neurophysiology and psychiatry over almost five centuries, would the 'knowledge of the soul' still not remain 'very obscure and difficult'?

The ontological conception of diseases changes over time slowly from a qualitative to quantitative interpretation as seen from the 16th century from Fernel to the 17th, with the clinical empiricism of Thomas Sydenham (1624–1689) and his definition of especie morbosae representing a substantial turn in the medicine of his time. His classification of diseases was based on syndromes, a symptomatological conception as also seen in his classification of mental illnesses when he distinguished three types of madness: 'hysteria', 'mania' and 'melancholy', based on prominent symptoms [3]. Finally reaching the 18th century, the time of ordered groupings of natural objects was established.

A considerable shift in the classificatory approach to disease occurred in the 18th century when Carl Linnaeus (1707-1778) classified the animal and mineral kingdoms, epitomized by his Systema Naturae (Nature's System), 1735, in which he divided each kingdom of nature into classes, orders, and species [4]. In the same path followed Linnaeus'
contemporaries, such as the French physician and botanist François Boissier de Sauvages (1706-1767) and the Scottish physician William Cullen (1710-1790).

In his treatise, Synopsis Nosologiae Methodicae (1769), Cullen before presenting his own diseases taxonomie, included the classes of neurosis and locales, he presented the previous one by three other authors: 1)- François Boissier de Sauvages in his Nosologie méthodique (A Systematic Nosology) (The definitive Latin edition in 1768, French, 1772), classification of mental illness had 1 class - Vesanias/Folies (madness, lunacy), 4 orders, and 26 diseases; 2)-Lineus, Genera Morborum (Varieties of Diseases) (1759), 1 class - Mentales (mental disturbances), 3 orders (Ideales- disorders of faculty judgment or alienation of mind, Imaginarii-disorders in which the imagination is principally affected, Pathetici-irregular desires), and 25 diseases; 3)-Rudolph Augustin Vogel, Generum Morborum (Varieties of Diseases) (1764), 2 classes - Hyperaesthises (abnormal sensitivities) and Paranoia (mental aberrations), 31 diseases [4, 5].

Meanwhile, Sauvages and Linnaeus seemed to build their classifications around symptoms, Cullen sought also to identify the causes of diseases as well as their symptoms in Apparatus ad nosologiam methodicam, seu, Synopsis nosologiae methodicae in usum studiosorum (1775) [4].

Thus, Cullen's 'neuroses', a term coined by him, in plural form, covered a very heterogeneous field of affections, organized according to four specific 'orders' of phenomena not resulting from localized injury, not accompanied by fever and affecting sensitivity and movement in a privileged way: comas, adynamias; spasmodic affections without fever and vesanias, such as mania (madness) and melancholy. The class of the neuroses, 'nervous disease', that had been started by Thomas Willis (1621-1675), who coined the term neurology, besides Sydenham, where subdivided into four orders: Comata (dishevelment), Adynamiae (weakness), Spasmi (spasms, cramps), Vesaniae (tranquil partial insanity). The Vesaniae included Amentia (idiotic insanity), Melancholia (sad partial insanity), Mania (madness), Oneirodynia (intense mental disturbance associated with dreaming [5].

In summ, the main early influence on psychiatric nosology comes from biological taxonomy and its deductive approach, from few essential features and 'expert-driven’, soon rejected for a better one, inductive, using diverse illness characteristics. Thus, these neuroses are not
superimposed on what is currently designated, as they include organic disorders as well as psychotic ones. This is how we see the different nosological entities divided similarly to biological taxonomies as species grouped into genera (diseases), after grouped into orders, until groupings as classes, as of the mental disorders.

Also, in the middle of the 18th century, the importance of the anatomoclinical conception gave credibility to the propensity for a disease morphological classification, but Giovanni Battista Morgagni (1682-1771) became recognized for being influential in this pathological anatomy recognized patients with brain damage, but mentioned only a few mental illnesses: delirium, insanity, and hydrophobia [4].

Mainly in the 18th century, vesania (from Latin 'madness') acquired many more species that would come to be unravelled in the following centuries with the help of somaticists or psychists. In between, there is a pioneer in psychiatry, Philippe Pinel (1745-1826) who also developed an initial classification of physical illnesses based on his predecessor's taxonomist.

**Achievements in the 19th century**

Psychiatry as a distinct medical discipline began to be delineated from the 18th century onwards, however, Pinel preferred the term *aliénisme* and Johann Christian Reil contributed with the one *Psychiatrie* (psychiatry) (1808), with the Greek roots on 'soul, mind' + iatreia 'cure' (from iatros 'healer'). At that time, this field of medicine was practically concerned only with patients confined to asylums or hospitals who usually had severe psychiatric problems and European psychiatry struggled between somatogenic and psychogenic explanations of mental illness, particularly hysteria. As for Psychose (Psychosis), Ernst Feuchtersleben (1806-1849) proposed this designation for a 'mental disorder which affected the personality as a whole', as a subset of neurosis by Cullen (1784) that denoted all the diseases of the nerves and muscles. Feuschterlslebeen also considered hysteria a neurosis, related to nervous function since the previous century, considered more biologically based than psychosis, which was compatible with the conceptions of the time [6]. Many other terms emerged in psychiatry, and the German-speaking world is especially responsible for the rise of neologisms from ancient Greece in European psychiatric nosographies [7]. To be mentioned the ones as *Catatonia* (1874), by Karl Kahlbaum included a variety of movement disorders, including 'catalepsy' (waxy flexibility); *Hebephrenia*, 1871, by Kahlbaum’s
associate Ewald Hecker regarding psychosis in an adolescent with avolitional syndromes and blunting of affect [8].

Consequently, insanities (later psychosis) [6, 9, 10], besides dissociation [6] and neurosis [11, 12] became the backbone of the psychiatry classification, the neurosis of the nerves, but around the beginning of the 20th century, this conception reversed, as most psychiatrists’s conceptions saw the organic basis of the insanities, but the neuroses, psychogenic and functional.

Psychiatric nosology throughout the 19th century occupied an important place parallel to the definition of the outline of the area of knowledge of psychiatry alongside that of neurology. Philippe Pinel (1745-1826) is often considered the 'father of modern psychiatry' mainly because of his revolutionary ‘traitement moral’ of the mentally ill, as well as his contributions to the diagnosis of mental disorders. Consequently, he is an important pioneer in the humanized treatment of the mentally ill at the height of the new humanitarianism of the Enlightenment and the French Revolution. This was carried out at La Bicêtre and the Salpêtrière in 1793 and 1795 which also included unshackling patients. Pinel initially adopted Cullen's classification in his *La Nosographie philosophique ou La méthode de l’analyse appliquée à la médecine* (*The philosophical Nosography or The method of analysis applied to medicine*) of 1798 that went through six editions, from the first until 1818. The fourth class of the first edition of Pinel’s Classification includes the Neuroses that are considered Varied phenomena produced by the lesions of feeling and movement, the seat of which is sometimes in the brain, sometimes in the epigastric region. These Neuroses are divided into four orders: Vesanies or non-febrile mind wanderings; Spasms; Local abnormalities of nerve functions; Comatosis affections. Pinel distinguished 4 broad groups of mental disorders: melancholy, mania, dementia, and mental retardation [13]. It differs from its predecessors because it does not only base its classification on symptoms but also on the organs on which these diseases cause lesions [14]. Pinel’s first conceptions about mental illness are expressed in his discourse about *Mémoire sur la manie* (*Memoir on Madness*) (1794) where he reported that apud Harris [13]: 'The idea of madness should by no means imply a total abolition of the mental faculties. On the contrary, the disorder usually attacks only one partial faculty such as the perception of ideas, judgment, reasoning, imagination, memory, or psychological sensitivity.' Two other important books by Pinel were *Le Traité Médico-Philosophique sur l’aliénation mentale* (1801, 1809), with a popular
translation, A Treatise on Insanity (1806), which had great repercussions in the 19th century, in addition to _La médecine clinique (Clinical medicine)_ (1802, 1804, 1815). Dumouchel [14] considered that for Pinel 'there is no particular theoretical reason to consider madness as a disease radically different from other conditions from which a patient may suffer'. In the Traite Médico-Philosophique, first edition [15], there is a presentation of what mental alienation is, constituted by the almost complete recovery of a memoir on intermittent or periodic mania, whose condition is an acute illness. The term 'mania' means both a particular form of vesania and insanity in general, from which the chronic forms accidentally derive. Pinel differs from the nosographers who preceded him by completely abandoning the classification of diseases based on their seat, for example, head disease or stomach disease. Naturalists classify plants according to their characteristic traits, regardless of where they live, and Pinel later also wanted to distinguish lower-level categories within a family of diseases, with specification within a class already constituted based on other purely symptomatic criteria.

It was only progressively that the contemporary conception of 'neurosis' was constituted and spread universally. But, already in Pinel's work, the term 'neurosis' has the connotation of diseases of the nervous system with no known basis. Pinel also contributed to the nowadays classification of mental disorders and would be the first to completely classify mental illness by identifying different categories of patients. He is also known to be the first author to include a personality disorder in psychiatric nosology [16].

Pinel was mainly followed by Jean-Etienne Esquirol (1772-1840) who in 1838 published Des Maladies Mentales with a statistical approach. He also highlighted the idea that personality vulnerability against external precipitants may underlie a better understanding of mental illness; besides he deepened his work and made a distinction between hallucinations and illusions; and he divided mental nosology among the headings _délire général, délire partiettle and affaiblissement intelectuelle_, this divided between congenital and acquired [6]. In addition, in 1816, he developed the concept of delusional disorders ('monomania') [8].

As a whole, psychiatrists like Pinel did not treat those who functioned minimally in everyday society, and neurologists were in charge of patients with 'nervous' conditions, minor disorders, and neuroses, supposedly of nervous origin [17].
In 1859, Paul Briquet published 'Traité clinique et thérapeutique de l'Hystérie' ('Clinical and Therapeutic Treatise on Hysteria'), in which he detailed descriptions and analyzes the disorder of somatic symptoms and hysteria, with knowledge about these enriched mainly by neurologists such as Jean-Martin Charcot (1825-1893) and Sigmund Freud (1856-1939). At the time, the neurologist Charcot at the Hospital Salpetrière was involved in an etiological dispute about hysteria considering it a neurological condition [18]. Charcot reach an idea of hysteria linked to dissociation of psychological unity. However, after his death, his influential disciple Joseph Jules François Félix Babinski (1857-1932) spread the idea that hysteria was only the result of a suggestion to be dealt with persuasion which was criticized by other Charcot’s disciple, Pierre-Marie-Félix Janet (1859-1947), a philosopher and later physician interested in the dissociation of the personality and traumatic memory [6, 19].

Furthermore, around hysteria and hypnotism, Charcot influenced psychiatry, psychology and psychotherapy both through Freud and Janet. Although none of them were alienists, their work was on neurosis, at the time allocated to internal medicine, but they became enemies, but now the second is emerging after the psychoanalytic decline [20]. Anyway, around the beginning of the 20th century, German psychic was a forerunner of psychoanalytic discoveries as Josef Breuer (1842–1925) and Sigmund Freud (1856–1939) opted for a psychogenic explanation for mental illness by treating hysteria through hypnosis, which eventually led to the cathartic method that was a precursor for the influent psychoanalysis unfolded in the first half of the 20th century [1].

Aside, the American physician George Beard proposed the term neurasthenia (1869) with the energetic conception, as the new clinical entity corresponding to the nervous energy exhaustion. This concept was also projected to the one of neurosis in the first half of the 20th century, and depression, from the second half of the same century [11, 12]. Consequently, hysteria and neurasthenia became the two great neuroses and were classified as functional diseases, resulting from some disturbance or change in the functions of an organ, but without any definite organic lesion that was supposed to exist [21]. Furthermore, the idea of anxiety neurosis was first formulated by Freud in 1895, close to hysteria and neurasthenia.

Regarding shell-shock, it was recognized during the First World War, now termed posttraumatic stress disorder (PTSD) that appeared in DSM-III.
1980, but other names were recognized for this disorder such as soldier’s heart and war neurosis or névrose de guerre. Honigman, a German physician, was the first to coin this last term (Kriegsneurosis), in 1907, previously called 'combat hysteria' and 'combat neurasthenia'. There is also a similarity between these cases with those reported by Oppenheim after railway accidents [21, 22].

The controversy between psychics and somatists was overcome with the work of Wilhelm Griesinger (1817-1888) the substitute of Moritz Heinrich Romberg (1795–1873) as director at the Charité University Polyclinic, Humboldt University. Romberg who wrote the first systematic textbook on neurology, Lehrbuch der Nervenkrankheiten des Menschen (Textbook of human nervous diseases), divided neurological symptoms into sensory neurosis and motor neurosis (1846) [23]. In 1865 Griesinger moved to Berlin, where he succeeded Romberg, and also established an influential psychiatric journal, the Archiv für Psychiatrie und Nervenkrankheiten. In this way, Griesinger was appointed professor of neurology and psychiatry in a formal unification of them under his leadership, thus realizing his unshakable philosophy of the inseparability of the mind from the brain [19]. He became the dominant figure in mid-nineteenth-century German psychiatry, and he developed a subtle and sophisticated nosology of psychiatric illness and his reductionist idea that 'mental illness is brain disease' [24]. It should be noted that one of Griesinger’s original contributions to nosology was the introduction of a new clinical criterion, evolution, which would prove to be very relevant in the work of Emil Kraepelin. This somatogenic propensity would find its limits in the impasses constituted by the theory of degeneration led by the Franco-Austrian psychiatrist Bénédict A. Morel (1809–1873) who published "Traité des dégénérescences physiques, intellectuelles et morales de l’espèce humaine" ('Treaty of Degenerations'), which heralded the theory of Degeneration, one of the most influential concepts in psychiatry for the rest of the 19th century. Also, he coined the term 'démence précoce'-dementia praecox, for patients with 'stupor' (melancholy), in 1852 [6, 19].

The Austrian Theodor Meynert (1833–1892) was also a 'brain psychiatrist' and he is also recognised, together with the French neurologist Déjerine, as the founder of the cyt架构ectonics of the cerebral cortex [19].

The somatic idea had been favored when a clinical entity was isolated and characterized clinically by specific symptoms, with a defined clinical course, and pathologically, by a precise lesion in the central nervous system.
was already in 1822, long before the relationship between progressive general paralysis and syphilis was suspected when Antoine Laurent Jessé Bayle (1799-1858) defended a thesis called 'Recherches sur les maladies mentales' ('Research on mental illnesses'), in which he maintained that madness was, at times, the symptom of a chronic inflammation of the arachnoid, one of the meningeal membranes that surround the brain. This scheme perfectly corresponded to the anatomopathological concept of disease that was being developed at the time. However, it was only in 1879 that Jean Alfred Fournier (1832-1914) recognized the syphilitic etiology of progressive general paralysis, and in 1913 that Noguchi identified treponemes in the brain of patients with this condition [17].

At this point, it is recognized from the disease systems presented in the 18th and 19th centuries, none had yet included scientific contributions such as morphological pathological alterations mainly by Giovanni Battista Morgagni (1682-1771); physiological pathological changes, added mainly by Claude Bernard (1813-1878); on the origin and causality of infectious diseases, e.g. Louis Pasteur (1822-1895) and Heinrich Hermann Robert Koch (1843-1910); in addition to the processes involved at the cell level that was best recognized by Rudolf Ludwig Karl Virchow (1821-1902) [25]. As a result, in the first half of the 19th century, two schools disputed primacy, that of psychics and that of somatists, with an initial advantage for the first, but in the second half, the somaticists had vanguard.

**Achievements from the early until middle 20th century**

The influential German School on the verge of a new nosography of mental disorders includes names such as Wilhelm Griesinger (1817-1868), Emil Kraepelin (1856-1926), Sigmund Freud (1856-1939), Paul Eugen Bleuler (1857-1939), Karl Theodor Jaspers (1883-1969) and Kurt Schneider (1887-1967). The latter two also worked at the Heidelberg Hospital where the psychopathological orientation dates back to the Kraepelin presidency when it attracted many collaborators such as Alois Alzheimer (1864-1915) and Franz Alexander Nissl (1860-1919), both famous neuropathologists. The first was the descriptor of the 1st case of dementia later called by his name, and the second, mainly known for describing the neuropathology of paralytic dementia [26]. Alzheimer's examination of the brain of a patient with dementia, he discovered histological lesions (called plaques and neurofibrillary degeneration) characteristic of Alzheimer's disease, and Kraepelin later (1912) proposed naming this type of dementia after his colleague Alois Alzheimer [27]. There was also a classificatory current under the influence of Carl Wernicke, Karl Kleist and Karl Leonhard which
was based on brain localization [3]. The following names works are in part a consequence of failings of the ‘first biological psychiatry’ of the late 19th Century, not against neuroscience, but only an adaptation of the knowledge at the time [17]. Indeed, the 19th and early 20th centuries saw several psychiatric nosologies with a range of assumptions about what constitutes the essential features of psychiatric nosology. Consequently, these authors defined diseases, in anatomopathological, pathogenetic or etiological terms, syndromes, or abnormal variations depending on different validators in a close connection between clinical, biological and philosophical approaches. Consequently, this was a prolific time, including the movement around neurosis migration from the area of neurology to mainly the one of psychiatry, and regarding psychosis, it was better defined and studied by the German School of Psychiatry as we will see.

**Emil Kraepelin**

Emil Kraepelin (1856-1926), the German psychiatrist, is considered the pioneer of modern psychiatry and psychiatric genetics when he elaborated a new dominant diagnostic system in the field with its influential foundations until today. German psychiatry was influenced by the Griesinger conception of mental disorders as a brain disease, Kraepelin also worked with the psychiatrists Bernhard von Gudden (1824-1886), and later, in 1882, with Paul Flechsig (1847-1929) both considered 'brain-psychiatrists,' but Kraepelin’s trend was for psychopathology and experimental pharmacology [28]. His influential nosological model is that all mental illnesses can be categorically defined as real, recognizable, unitary, and stable objects [29]. However, Kraepelin's psychiatric nosology in correspondence with his time, was predominantly descriptive, with an emphasis on the course rather than symptoms, categorical, phenomenological and nomothetic (laws or generalizations that apply to all people), consequently with a clinical emphasis [3]. This pioneer developed diagnostics that addressed fundamental clinical needs such as predicting the course of disease. Unlike the vast majority of his colleagues, Kraepelin rejected Griesinger's institutional efforts to merge the emerging disciplines of psychiatry and neurology, as psychiatric disorders were essentially just a subgroup of neurological disorders. Thus, according to Griesinger, the two fields should not be separated from each other. 'alienation between teaching hospitals and mental asylums', but neurology had very little to offer alienists in the way of practical therapeutic advice [23]. Kraepelin described the major type of psychiatric disorder in his time, mainly psychosis but his manic-depressive insanity included all mood disorders, of any polarity, but 'psychogenic depression' was a separate illness,
consequently, he is not a strong predecessor of the *DSM*-III 'bipolar disorder', besides, he substitutes the term 'melancholia' for 'depression.' and 'anxiety' was not a discrete diagnosis [8].

The definition of mental disorder reaches Hippocrates with the distinction of the disease 'melancholia' and the personality, and Aretaeus of Cappadocia who first linked these two states believing that melancholia and mania have the same etiology coming from brain dysfunction [30]. Reaching the mid-19th century, these two states were re-examined by two French physicians. Jean-Pierre Falret (1794-1870) created the first concept of a new and separate psychiatric disorder which encompassed both mania and depression (1851), described by him as folie circulaire, and Jules Baillarger (1809-1891) described 'folie à double forme' in which mania and melancholia change into one another but with no need for a free interval between the two.

Kraeplin believes that the etiology of most had an inherent bodily defect, and the Kraepelinian dichotomy between manic-depressive psychosis (bipolar disorder) and dementia praecox (schizophrenia) was already presented in the 6th edition of his famous book *Psychiatrie. Ein Lehrbuch für Studirende und Aerzte* (*Psychiatry. A textbook for students and physicians*) - eight editions from 1883 to 1909 [6, 31]. These conceptions were very influential in the major modern classifications.

**Eugen Bleuler**

Paul Eugen Bleuler (1857-1939) was a Swiss psychiatrist best known for his contributions to knowledge about 'the group of schizophrenias,', a term first introduced by him in a lecture to German psychiatrists (1908). His *'Dementia Praecox oder Gruppe der Schizophrenien'* was published in 1911, and later it influenced both the *Diagnostic and Statistical Manual of Mental Disorders*, First and second editions. At the time, as psychiatry in the United States was strongly psychoanalytic, it easily assimilated Bleuler’s relatively broad and psychologically based diagnostic category of schizophrenia, which did not emphasize psychotic symptoms. In consequence, this diagnostic criteria has become broad and diffuse and difficult to be reliably applied [32]. The history of dissociation and psychosis, particularly concerning hysteria and schizophrenia, goes back to the Enlightenment and Franz Anton Mesmer (1734-1815) to the early 20th century. They were initially studied as separate entities but later combined, mainly about the development of the concept of schizophrenia, within Bleuler's schizophrenia before becoming disconnected again [6].
conclusion, Bleuler's (1911) teachings according to Moskowitz and Heim [32]: (1) 'I call dementia praecox 'schizophrenia' because the ‘splitting’ of the different psychic functions is one of its most important characteristics.' (2) Bleuler primarily considered loosening of associations to be the core psychological deficit underlying most of the other characteristic symptoms of schizophrenia., (3) that Bleuler's teachings could be accurately summarized under the rubric '4 A's'—for association, affect, autism, and ambivalence, all the 4 A's were considered fundamental symptoms, only loosening of associations was also considered primary; (4) Under the influence of Carl Gustav Jung (1875-1961), also a Swiss psychiatrist, at the time, Bleuler's assistant and friend and disciple of Freud, Bleuler gives Freud significant credit, saying that an 'important aspect' of his 1911 book involves the attempted 'application of Freud's ideas to dementia praecox.' While Bleuler typically held schizophrenia to be organically based, he sometimes wondered about environmental influences.

Karl Jasper
Karl Theodor Jaspers (1883-1969) was a German philosopher and psychiatrist who integrated science with philosophical thought, reflected in his greatest work of paramount importance in psychopathology, Allgemeine Psychopathologie für Studierende Ärzte und Psychologen (General Psychopathology for Students Physicians and Psychologists) (1923) [33].

Jaspers' psychology and psychopathology originated from theoretical and practical activity at the university psychiatric clinic in Heidelberg, where he worked from 1908 to 1915, much of this period coinciding with the direction of Franz Nissl (1904 to 1918), previously under the direction of Kraepelin (1890-1904). He was as critical of Wernicke as he was of Freud's or Kraepelin's theories [34]. However, aware of the fact that disease categories are necessary for clinical practice, he proposed the following classification system largely in line with Kraepelin's tripartite classification: 1. Brain dysfunctions (organic psychoses); 2. Mental disorders attributable to somatic causes, but without corresponding pathophysiological findings (functional psychosis); 3. Neurotic disorders, abnormal psychogenic reactions and psychopathies. Jaspers considered this final group to be 'personality variations' with no somatic origin. This classification system was supplemented by a hierarchical rule that Jaspers adopted from Hughlings Jackson [35].
It would be up to the various psychological schools to study the causal associations of the conscious experiences systematically described as phenomenologically developed by Jaspers: phenomenology. Recognizing, classifying, and treating illness starts with diagnostics and Jasper's psychiatric semiology organized the principles on which the current diagnosis is based [35].

**Kurt Schneider**

Kurt Schneider (1887-1967) was a German psychiatrist who became director of the German Psychiatric Research Institute in Munich (1931), which was founded by Emil Kraepelin. He is also included in the Heidelberg School of Psychiatry as in 1946 he was appointed Dean of the Faculty of Medicine at the University of Heidelberg, where he retired, but remained active as a mentor and author until he died in 1967 [36]. He published his most historically significant publication with the first edition, in 1946 entitled 'Beiträge zur Psychiatrie' ('Contributions to Psychiatry') which through nine editions, from the third, became known as 'Klinische Psychopathologie' ('Clinical Psychopathology'), and the fifth edition was translated into English [36]. Besides, he published his work on the classification of personality disorders: *Die psychopathischen Persönlichkeiten oder der Seelenstörungen und ihrer Behandlung (The psychopathic personalities or mental disorders and their treatment)*, the first edition in 1923 followed by more eight editions [37].

Schneider was remarkable for his works on concepts of psychopathy, and the first-rank symptoms of schizophrenia. The so-called Heidelberg School beginning in the early 1930s arose the now-called 'first rank symptoms' (FRS). Schneider claimed that nine groups of psychotic manifestations, designated as FRS had a 'decisive weight' in the diagnosis of schizophrenia that was subsequently incorporated in the DSM-III and ICD-10 [38].

Schneider defined 'psychopathic' personalities as those individuals who suffer, or cause society to suffer, because of their personality traits, he understood that they are mainly inborn constitutions, but they can evolve by outside influences [16]. Schneider also proposed that there was a fundamental psychopathological difference between two sorts of depressive conditions – the melancholic or endogenous variety, 'endogenous depression', and the reactive variety [36].
Sigmund Freud
Sigmund Freud (1856-1939) was an Austrian neurologist and psychiatrist, who abandoned neuroscience after he made a last attempt to link both in his writing 'Project of a Scientific Psychology,' (1895) approaching neuronal mechanisms to psychodynamic concepts what would be persecuted by the nowadays. Consequently, he replaced this focus with one exclusively on psychodynamic issues like the ego, dreams, and unconscious vs. main sexuality, and nowadays neuro psychoanalysis is on the path of the main ideas of psychodynamics. Consequently, Freud wisely caught that the neuroscience of his time was not mature enough to permit the linking of neuronal mechanisms with psychodynamic concepts, and he would have more freedom to make his assumptions without the need to validate them [39]. Unfolding his reasoning, he became the creator of psychoanalysis and an extremely influential personality in the field of psychology At the time when Freud began to develop his work, the term 'neurosis' was facing its moment of greatest decline since Pinel excluded it from the scope of alienism. He published theories about the unconscious roots of some of the less serious mental disorders, which he called psychoneuroses that could not be explained clinically. Freud and Josef Breuer (1842-1925), also an Austrian physician and physiologist, published Studies on hysteria, based on the case of Bertha Pappenheim (known as Anna O.), developing the Talking Cure. In 1899, Freud published Die Traumdeutung (The Interpretation of Dreams).

The main influences suffered by Freud came from Austria, combining a romantic philosophy of nature with the principles of experimental psychology, and France, from the School of the la Salpêtrière, led by Charcot and that of Nancy around hysteria and psychoanalysis. However, Freud´s original main influences on hysteria come from Janet´s ideas on dissociation besides Breuer´s cathartic method, associated with sexuality [6]. Regarding Freud's psychiatric nosology, it was predominantly etiological, phenomenological and idiographic (uniqueness) [3].

A development, Freud developed psychoanalysis to treat 'neurotic' patients, which mainly brings the strong psychological connotation of 'neurosis', but this term is much less in current diagnostic systems, although the International Classification of Diseases (ICD) in its 10th Edition still maintains the category of 'neurotic disorders. Besides, psychoneurosis is the main diagnosis in psychoanalysis [8]. However, psychoanalysis thus became the first treatment for outpatient psychiatric patients, mainly in the first half part of the 20th century, offering gradually
different schools of psychotherapy found today around behavioral, cognitive, cognitive-behavioral, psychodynamic and broader customer-centric applied psychotherapy in individual, marital, family or group formats [1]. Thus, the 'deinstitutionalization movement' took place and many patients were being released from the asylum due to the positive curative effects of the combined use of medication and psychodynamic psychotherapy. In conclusion, psychoanalysis was the dominant paradigm in outpatient psychiatry in the first half of the 20th century, applied with exaggerations, for good and for bad, as it was an intervention that was difficult to assess.

Conclusion
There is always an epistemological and ontological difficulty inherent in the definition and classification of mental illness, but gradually it is better understood with projections on psychiatric taxonomies that include criteria for standardized definitions that are mainly aimed at research proposals as it was in the beginning for botanical/zoological aims. On the other hand, despite these classifications being born as a diagnostic criterion that includes a set of signs, symptoms and tests they are also needed for use in the clinical routine of individual patient care. This is extremely important because, for the process of recognition, classification and treatment, the patient begins with the diagnosis of the psychiatric condition to be faced. Thus the classification is limited by contemporary medical knowledge but is dependent on a diagnostic label that dictates medical practice. However, the core of nosology in psychiatry is even more controversial than in medicine as a whole, which has been more successful in trying to be causation-based, thus more easily following the dominant biomedical model despite the inherent task difficulties. The main landmarks of psychiatric nosography are successively represented since the 17th century by the British, French, and German mental health studying schools, and more recently heavily also by the American, aside from the World Health Organization. Psychopharmacology has taken a great therapeutic leap, also with potential repercussions on psychiatric nosography.

Referências


Figure 1. Some outstanding founders of the modern psychiatric nosography (Images from Public Domain, the one by Kurt Schneider, adapted).
Figure 2. The leading books on the nosography of mental disorders since William Cullen and Philippe Pinel are representative of the successive leadership of British, French, German and American developing psychiatry. The first two editions of the Diagnostic and Statistical Manual of Mental Disorders (DSM) were heavily influenced by the psychodynamic views of Sigmund Freud. However, the dominant and resplendent German psychiatry was shaken by the turbulence of the 2nd world War and the American hegemonic world power in medicine emerged based initially on the psychodynamics announced by the Austrian Jew Freud, later established in London. The success of the new psychopharmacology heralded again the shift to somatogenic perspectives of the nosology, from DSM-III on and mainly on DSM-11. Public domain images.