2

Epistemic Inroads from the Asylum to Digital Psychiatry

Expertise about mental health has been marked since its early days by an important set of challenges, which it has not yet managed to fully overcome. Psychiatry's recognition as a medical specialty in its own right, the scientific character of its methods, the effectiveness of its therapeutic interventions, its political functions, and the struggle between care and cure have marked its history (Rose, 2018). Important have also been the various jurisdictional struggles in which psychiatry has been embroiled, as authority over various areas of mental health has been claimed by different disciplines, which have developed or become more influential over the years due to the availability of new types of tools and knowledge. These aspects are important in view of the new conceptualization of expertise that I put forward, where epistemic practices are shaped by the ecosystem within which they develop, which frames their conditions of possibility. Based on this understanding, expertise about bipolar disorder online emerges at the confluence of specific historical trajectories that have shaped how and what has been studied in relation to mental health conditions, of current needs and circumstances in this healthcare sector, and of expectations about the future. To better understand the online practices that this book focuses on, this chapter draws an arch, stretching

from the establishment of asylums at the beginning of the nineteenth century to the current provision of mental healthcare in the US and France and the future visions animating it. Such a broad longitudinal perspective means that while important elements will be highlighted, many complex debates will be simplified and a series of aspects that are not directly relevant for the argument made in this book will be overlooked. These shortcomings are mitigated, however, by the fact that the understanding of the online practices discussed in the following chapters will be enriched through the historical insights and future hopes and fears about the digitalization of mental healthcare (Pickersgill, 2019) described here. This will allow us to better appreciate the novelty but also the continuity that underscores them.

Historical Overview of the Development of Expertise About Mental Health

Significant for the development of expertise about mental health are the changes that took place at the end of the eighteenth century, when the realization that community care for the "insane" often involved abusive approaches prompted many to advocate for the necessity of "moral treatments" and the establishment of asylums as the means to achieve this. Since it was largely thought that "madness" was triggered and/or aggravated by the circumstances one found oneself in, asylums were envisioned as tranquil, orderly places, where one could recover from the humdrum of modernity and industrialization. Thus, in the early days, at least, the establishment of asylums was animated by humanistic tendencies, by the desire to cure those afflicted by "madness" and to provide them and their families with support and solace. From this point of view, the asylum system could be understood as a precursor and important influence on the development of the welfare state, as Porter (2018) convincingly argued. Its spread was encouraged in France by the 1838 law which required mental health facilities to be established in each département, and similar legislation was soon passed also in the US. Throughout the nineteenth century and beyond, mental healthcare continued to be

provided in various ways, within the community and across other institutions, such as university hospitals and private clinics (Rose, 2018). Where one received mental healthcare depended not only on the facilities that were available in one's region, but also on one's socioeconomic status. In France, asylums were funded by the state, which helped inform a greater degree of centralization and standardization of practices, even though important differences were recorded between departments depending on the availability of such facilities. In the US, their funding depended on legislation and the preferred policies and approaches at the level of the individual states, which led to greater variability and disparities. As we shall see in the next chapter, such differences made a durable mark upon the organization of the mental healthcare systems in these two countries and can also be noted these days.

The establishment of asylums played an important role in the development of "mental medicine" as it made it possible for alienists, the doctors treating the "mad," to study the behaviors of a great number of patients and to engage in various experiments. At the time, mental healthcare was provided based on the symptoms patients experienced and consisted of a combination of scientific and behavioral measures, which varied in duration, harshness, and intensity. Mental health conditions were distinguished based on groups of symptoms and they were thought to be brought about by physical, moral causes, or a combination of both. Distinctions were made between predisposing and effective causes, as it was thought that whereas one may have been susceptible to develop mental health issues due to bodily factors, a triggering event was needed to set such processes into motion. Such events were often of a moral nature, as can be noted by the numerous causes for mental illness that were circulated at the time, ranging from revolutionary excess and participation in political events, to sedentary occupations, and a low level of instruction (Porter, 2018).

This understanding of causes greatly shaped how mental health conditions were studied as well as how they were intervened upon. Alienists initially combined clinical and laboratory expertise, as they sought to locate these conditions within the body, and apart from the various examinations on asylum residents, they also engaged in postmortem investigations, focusing primarily on the brain. Yet, by the second decade

of the nineteenth century, the lack of any reliable indication that markers of "madness" could be indisputably identified within pathological autonomy "were drawing the profession into crisis" (Arribas-Ayllon et al., 2019: 28). This prompted the alienists to focus on heredity, for which they had shown little interest prior to 1812, as a fundamental cause (Arribas-Ayllon et al., 2019; Foucault, 1972/2010). They understood heredity as a predisposing cause, which could trigger mental health conditions in combination with what were thought at the time as morally reprehensible behaviors, such as the consumption of alcohol, masturbation, and overwork. The study of heredity was accompanied by the development of new approaches and techniques, as it broadened the focus from the individuals afflicted by mental health issues to their families and made new types of data necessary, which could be acquired through detailed questioning, family history searches, and the development of family pedigrees. Even though the alienists enthusiastically engaged in the collection of vast amounts of data, the latter were not equally available across institutions, nor were they systematically collected from the very beginning. Substantial efforts were therefore dedicated to improve the quality of the data collected and to standardize the data collection methods, so as to facilitate comparisons and to enhance the scientific character of the insights acquired. An important landmark in this sense was Esquirol's use of the statistic table as a means to organize mental health cases in France, practice which became popular among many alienists, who soon improved on this technology in order to better determine correlations (Porter, 2018).

Psychiatric expertise thus came to rely on a combination of clinical and statistical knowledge, and the latter informed its development as a partially international enterprise. Knowledge was intensely exchanged among alienists through professional tours in the US and Europe, at international meetings organized by the numerous professional associations that were being established, and through the eager publication of their statistics in the specialty journals that were founded in considerable number from the 1840s onward (Porter, 2018). There were, however, also important differences among countries concerning the role ascribed to statistical knowledge in relation to psychiatric expertise and to what were considered the best means to study the impact of heredity on mental

health. Thus, whether or not the deployment of statistical methods was an indication of scientific rather than merely administrative or bureaucratic expertise was the object of heated debates in France, where many mental healthcare professionals reproached their statistically bent colleagues for having a simplistic understanding of heredity and mental illness. Under their influence, the dominant understanding of "insane heredity" in France became that of a process of physical and mental decay where the environment played a complex role, and "insane heredity" continued to be studied through cases. This marks an important difference between the US and other European countries, such as Germany, where expertise about the heredity of mental health conditions was successfully claimed by statisticians and geneticists (Porter, 2018).

Despite the more standardized data collection and statistical methods used, the mechanisms through which heredity affected mental and bodily processes continued to remain unclear. The alienists managed, however, to successfully mobilize this uncertainty to position mental health as an important social issue, which required not only treatment, but also urgent social reforms focusing on prevention at the national level. In France, this process was facilitated by political developments, as medical practitioners came to play an important role in public health due to the Napoleonic reforms. As heredity's influence on the development of mental illness was thought to be rather grim, the alienists warned that it led to degeneration through its cumulative effects across multiple generations. Hereditary mental defects thus became a national concern, as they could impede a country's progress and competitiveness, and their management required a combination of scientific and moral approaches. The same ethos was exuded in the US by many asylum supporters, who argued in favor of a greater provision of funds for these institutions and for important social measures as an adequate response. In this context, the alienists successfully positioned the moral expertise they claimed to be endowed with as highly relevant, and came to "moralize the masses" (Arribas-Ayllon et al., 2019:30) by directing nation-wide efforts to eliminate the moral behaviors they found problematic. Through their work, from the 1840s onward, both in France and in the US, the population censuses started to collect data through which the spread of mental health conditions and the role of heredity in such processes were hoped to be determined at the level of the nation.

Such data collection processes went hand in hand with attempts to standardize diagnoses, yet mental health conditions proved difficult to classify. Initially, alienists such as Pinel sought to distinguish between mental health conditions based on their etiology, that is, on their causes and origins, but the failure to identify specific physical causes brought such an approach under strain. As asylums made possible the observation of the pattern of symptoms experienced by an individual over a period of time, at the end of the nineteenth century, the German psychiatrist Emil Kraepelin advanced the idea of establishing diagnoses based on prognosis rather than etiology through the collection of detailed histories of the course of illness. Kraepelin put forward a new nosology, where he identified 13 major groups of mental health conditions. Relevant here is the division of psychotic illnesses into "manic-depressive psychosis" and "dementia praecox," known these days as schizophrenia, which he introduced based on the presence or absence of mood changes and by focusing on their outcome. Whereas the latter was understood to lead to cognitive and clinical decline, the former allowed for a less pessimistic perspective (Healy, 2008), although the overall outlook remained grim. Kraepelin's approach was met with reserve in France, partly due to recent memories of the war between this country and Germany and to persistent political animosities. But it also stemmed from the fact that French psychiatrists did not share his negative perspective on the outcome of these conditions, with many of them arguing that Kraepelin's views had been skewed by his observations of asylum patients, who presented more aggravated forms of mental health conditions than those who could be seen by city doctors, for instance, in other medical institutions (Hochmann, 2017). In contrast, Kraepelin's focus on prognosis was initially enthusiastically received by Adolf Meyer, director of the New York State Psychiatric Institute and, through his influence, by many other American psychiatrists, who appreciated the return to a clinical focus in psychiatry. While Kraepelin's perspectives remained generally popular in the US, in the 1920s Meyer himself changed course, as he reproached the German psychiatrist for a too strong neurological focus, and he highlighted, instead, the role of the environment in the development and outcome of mental health conditions. Thus, in Meyer's view, mental health conditions were not so much the result of the cumulated effects of faulty genes but rather

inadequate reactions to life circumstances that could be made sense of within the context of a patient's life (Healy, 2008; Hochmann, 2017; Rose, 2018) and that could be partially addressed and prevented through an adequate mental hygiene.

The search for diagnosis criteria based on etiology or prognosis marked a durable distinction among mental healthcare professionals of a different bent and was also reflected in their understanding of the role of genes in the development of mental health conditions. As the statistical data of populations came to be seen as a form of scientific capital at the beginning of the twentieth century (Arribas-Ayllon et al., 2019), it galvanized collaborations among alienists, statisticians, biologists, and so on and thereby challenged the separation between mental health expertise and "ordinary medicine" which had strongly persisted until then (Porter, 2018). Hopes of establishing mental health diagnoses based on etiology were revitalized by such collaborations through a renewed focus on the brain, on the one hand, and on the influence of genes, on the other. Thus, neurological and experimental approaches regained popularity among some mental healthcare professionals in the US, who thought the psychiatry of the asylums with its focus on clinical observations was outdated. For instance, the New York asylums purchased freezing microtomes for slicing brain samples, which they used for various investigations and preserved along with cards describing the behavioral profile of the person they were coming from, as even after the 1930s, some hoped to correlate characteristics of the preserved brain with the actions and behaviors of "insane" criminals. Also in France, a renewed focus on the neural and molecular mechanisms underlying specific symptoms could be noted, with neuropsychiatrists such as Clérambault arguing that delirious and hallucinatory states were the result of the irritation of nerve centers that could gradually engulf the entire cortex (Hochmann, 2017).

The role of genes in the development of mental health conditions acquired renewed attention, as important breakthroughs in the realm of statistics, such as Galton's probabilistic laws, allowed for mathematical relationships to be determined among generations in terms of hereditary transmission (Arribas-Ayllon et al., 2019). Further impetus was provided by the (re)discovery of the Mendelian ratios and the attempts to apply them in the study of the development of mental health conditions.

Noteworthy in this sense are the activities of the American researchers Davenport, Goddard, and Rosanoff, who tried to persuade their European counterparts that insanity could be explained as single-factor Mendelian traits, that is, that discrete genetic units could be linked with specific mental health conditions, such as manic-depressive illness, as bipolar disorder was largely known at the time. Heated debates emerged about the role of genes between such Mendelian supporters, many of whom were neuropsychiatrists, who considered different mental health conditions to be determined by specific groups of rare genes, and biometricians and clinical psychiatrists who argued that mental health conditions were triggered through the concerted influence of rare variants and multiple genes of small effects. The biometricians and statisticians found issue with the quality of the data and of the calculations upon which those in favor of Mendelism based their claims, whereas the psychiatrists found a clinical approach based on the long-term observation of the patient and the development of the disease more reliable and useful (Arribas-Ayllon et al., 2019; Porter, 2018).

By the end of the nineteenth century, the failure of the asylums had become obvious in both the US and France, as the number of people diagnosed with mental health conditions was on the rise, while the effectiveness of the treatments used remained limited. Different types of mental healthcare professionals embraced therefore hereditarianism. Some did this because the broader correlations heredity allowed for between physical and moral causes enabled them to claim expertise on various social matters (Arribas-Ayllon et al., 2019; Porter, 2018). Others became involved in social reforms and other political decisions pertaining to the management of populations, as it provided them with access to the resources and influence needed to continue their neurological and genetic studies (Porter, 2018). Heredity thus became entwined with themes of family and racial hygiene, as the research activities pursued by Davenport and his supporters in the US illustrate. Furthermore, next to warning against certain behaviors, the alienists came to give advice on reproductive practices. Psychiatry was thus from its early days a political science (Rose, 2018), which not only exerted negative power through prohibitions and forced commitment into asylums, but also positive power, as it encouraged the "healthy" population to "breed." Nevertheless, it is

important to bear in mind that, for at least the first half of the twentieth century, the trajectories of psychiatric genetics and neuropsychiatry were marked by the suffering, exclusion, and extermination brought about by mental healthcare professionals involved in the eugenics movement or collaborating with authoritarian political regimes. This, however, did not put an end to the claims of mental healthcare professionals to moral expertise, as they remain important to our present time, as we will now see, as we turn our focus to Freud and psychoanalysis.

While psychiatrists sought to determine the causes of mental health conditions by focusing on genes or on the brain, their jurisdiction over the field of mental health came to be disputed at the end of the nineteenth century by dynamic psychologists, who introduced a different perspective by focusing on trauma and its impact on individual development. Having studied in France, Freud was critical of the wide role ascribed there to heredity and degeneration in relation to mental health conditions (Hochmann, 2017). He argued, instead, in favor of a focus on the individual and its development, which Freud thought to be importantly shaped by circumstances unfolding in the private sphere (Hochmann, 2017; Illlouz, 2008). In France, the uptake of psychoanalysis was very slow and Freud's views remained largely unpopular until the 1960s (Turkle, 1981). The first French psychoanalytic association was founded only in 1926, more than a decade after its American counterpart, and this new approach to mental healthcare was generally disregarded by reputed French mental healthcare professionals as well as by vast numbers of the population, who considered it a new form of bourgeois self-indulgence (Turkle, 1981). In the US, however, psychoanalysis enjoyed tremendous popularity from its very beginning, at the confluence of three main factors: the ongoing jurisdictional struggles among medical professionals and representatives of the clergy about the provision of mental healthcare; the popularity of spiritual approaches and interventions focusing on the mind; and the ambivalence of Freud's theories which allowed various stakeholders to adopt them in the pursuit of distinct goals (Illlouz, 2008).

The support of the American medical elites for psychoanalysis ensured its development as a medical specialty in its own right and its embedding within influential institutions. Already in the second decade of the twentieth century, numerous professional psychoanalytic societies were

formed, the first American psychoanalytic journals, *The Psychoanalytic Review* and *The Psychoanalytic Quarterly*, were published, and uniform professional criteria were developed in a bid to heighten its authority and legitimacy. Furthermore, in 1927, the American Psychoanalytic Society decided that only medical doctors were allowed to train and practice as psychoanalysts (Illlouz, 2008), which enhanced its "domestication" (Turkle, 1981). The treatment of bipolar disorder in the US, over which psychiatrists had dominated, thus also came under the purview of psychoanalysts, who were importantly influenced by the works of Abraham, one of Freud's supporters and collaborators on *On Murder, Mourning and Melancholia* (1917/2005). Abraham focused on the study of psychoses and considered bipolar disorder to be the result of libidinal fixations that ensued as an infant's sexual development was frustrated. In his view, bipolar disorder thus constituted a reenactment of past conflicts informed by the ambivalence of the loved object. Abraham developed various methods through which psychoanalytic approaches could be employed as therapeutic practices for bipolar disorder and exerted a strong influence on Lewin's thinking, an important member of the New York Psychoanalytic Society. Under the influence of Erikson and Maslow, the ultimate goal of therapy came to be self-realization (Illlouz, 2008), which enabled psychologists to claim expertise over broad areas of social and private life, thus continuing the moral careers initiated by nineteenth-century alienists.

The publication of the first Diagnostic and Statistical Manual (DSM-I) in 1952 indicated that expertise about mental healthcare in the US was largely shaped at the time by psychoanalytic perspectives and by Meyer's psychobiological style of thought (Illlouz, 2008; Rose, 2018). The manual distinguished between mental health conditions that developed as a result of impaired brain functioning and psychiatric conditions, such as depression of phobia, which were thought to arise as the result of maladaptive behaviors. This latter group of conditions was seen as reactions to environmental circumstances rather than as full-fledged disease entities (Rose, 2018). This meant that an important aspect of therapeutic practice consisted of mental healthcare professionals' activities of interpretation of the symptoms exhibited by a person, which had to be made sense within the life story of the person diagnosed. This perspective

triggered, however, intense reactions from mental healthcare professionals who considered this a threat to the scientific character of psychiatric diagnoses, leading to the removal of the term "reactions" from DSM-II (1968) and to the pronounced biological and clinical focus at the heart of DSM-III (Healy, 2008; Rose, 2018). Under the strong influence of a group of psychiatrists at the Department of Psychiatry of the University of Washington, the 1970s were marked by a "major epistemological and ontological shift" (Rose, 2018:79) with the return to etiology in diagnosis, and the search for biological causes as underlying, even when partial, causes of disease. Expertise about mental healthcare was thus hoped to become more objective, as diagnoses were based upon observable symptoms, and, where applicable, upon laboratory tests, which were expected to be understood in the same way by any mental healthcare professional assessing them.

The 1980s were therefore marked by an acceleration of studies conducted to discover the neurological processes or the genetic factors underlying bipolar disorder and other related conditions. In psychiatric genetics, family and twin studies were taken up again, whereas technological developments, such as recombinant DNA and advances in chromosomal mapping, allowed for the construction of genetic linkage maps, thereby briefly bringing back to life and popularity the idea of single dominant genes the Mendelians had been so fond of (Arribas-Ayllon et al., 2019). Several claims about the identification of genes for bipolar disorder were made in the second part of the 1980s (Baron et al., 1987; Egeland et al., 1987), but they failed to be replicated. Even though the more advanced technologies developed in the aftermath of the Human Genome Project in early 2000 resurrected hopes about a more thorough understanding of the mechanisms through which genes were involved in the development of mental health conditions such as bipolar disorder, the results remained rather disappointing. Thus, at the entry into the new millennium bipolar disorder was considered to be the result of complex genetic traits, which "provide[d] theoretical coherence and respectability to an otherwise ambivalent relationship between genetic and non-genetic factors" (Arribas-Ayllon et al., 2019:75). Even though no biomarkers could be used as reliable indicators of diagnoses even by the time the latest DSM-5 (2013) was published, the widespread use of digital

technologies and advances in AI have nourished hopes that before long a precision medicine psychiatry will be within reach. The efforts to develop medical knowledge and therapeutic approaches for mental health conditions sketched thus far were also accompanied by important activities focusing on the provision of care, whereby support and self-help groups played an important role, as I briefly highlight below.

Self-help and Support Groups

The history of psychiatry has been profoundly marked by its confrontation with a double "temptation"—the provision of therapeutic care and that of social assistance (Swain, 1988). Given this book's empirical focus on the activities of people diagnosed with bipolar disorder and since "the emergence of support groups should be understood as the other side of the cultural coin of institutionalized therapeutic language" (Illlouz, 2008:186), it is important to briefly consider the role self-help and social support groups have historically played. In France, such groups have started to develop in the aftermath of the Second World War. A noteworthy landmark in the development of support groups, which consisted of both medical professionals and people diagnosed, was the founding of the Croix Marine movement (*Fédération d'Aide à la Santé Mentale Croix Marine*). It was initiated by three psychiatrists—Pierre Doussinet, Alice Delaunay, and Elizabeth Jacob—in 1952, with the aim of providing protection and mutual psychological and social help to people diagnosed with mental health conditions. While over the following two decades the provision of ambulatory care launched this way developed further, changes in French legislation in the 1970s regarding the status and prerogatives of social and medico-social institutions led to a strict separation between the provision of medical care and social action.

Inspired by the 1968 protests, a number of psychiatrists together with people diagnosed with mental health conditions founded the *Groupe d'Information Asile* (GIA) in the early 1970s (Bernadet et al., 2002), to fight against repressive practices in psychiatry. The group has since developed a strong juridical orientation and claims to have played a major contribution in the 2010 decision of the Constitutional Court, by which

all methods of involuntary commitment previewed under French law were declared unconstitutional (Troisoeufs & Eyraud, 2015). In the 1980s, the first association of people diagnosed with mental health conditions focusing on defending the rights of patients, *L'Association des Psychotiques Stabilisés Autonomes* (APSA), was founded with the support of psychiatrists. The first patient group with a specific focus on advocacy, *Advocacy France*, only came into being in the 1990s, drawing inspiration from advocacy groups in the US (Laval, 2015). Nevertheless, most French self-help and support groups still focus primarily on the provision of support and education for people diagnosed and their families (Troisoeufs & Eyraud, 2015). Such groups became all the more popular after the law stipulating the creation of mutual help groups—*Groupes d'Entraide Mutuelle* (GEMs)—was adopted in 2005. By 2008, 300 GEMs had developed (Girard, 2008), and in 2016, 430 GEMs were counted throughout the French territories (CNSA, 2017). Nevertheless, most of them continue to function locally, they do not reach the broad public, and have little political influence.

In the US, the peer support movement has its origins in the practices of hiring people diagnosed with mental health conditions in asylums and other psychiatric institutions in the 1920s (McCosker, 2018). The focus on self-help acquired impetus due to the popularity of psychoanalytic approaches in this country and its espousal of dominant American values, such as individual self-determination and entrepreneurialism. Under its influence, the self came to be perceived as an ongoing project, as malleable, adjustable, and improvable. And a lot of attention started to be paid to the development of behavioral approaches in mental healthcare, meant to help people diagnosed with mental health conditions better "cope" and "adjust" (Illlouz, 2008). Self-help and support groups in this country have their origin in two different types of organizations. Thus, self-help groups are linked to the funding of Alcoholics Anonymous (AA) in 1935, from which self-help groups have borrowed important organizational as well as ideological elements. In 1948, the first Fountain House, a social club for people diagnosed with mental health conditions, was founded in New York by We Are Not Alone, a group of ex-patients from the State Hospital. In the 1950s, the Fountain House came under the leadership of a social worker and broadened its focus to include, next to socialization,

employment training, so that its members could gain and retain jobs (Dincin, 1975). This model has spread and thrived over the years, now counting clubhouses across the US, the UK, and Scandinavia. One of the first instances of support groups in the US is Recovery Inc., which was founded by neuropsychiatrist Abraham Low in 1937 in Chicago, to care for people with mental health conditions after their discharge from hospital. While soon thereafter Recovery Inc. also turned into a self-help group, its success has been more modest compared to AA and other similar groups.

These developments took place in a context marked by calls to reform mental health hospitals and turn them from places of confinement into spaces of care. They were also informed by the growing realization that the availability and accessibility of community care provisions were insufficient due to the rapid pace of de-institutionalization, ensuing organizational loopholes, and insufficient funding (Brown, 1988; Estroff, 1985/2001). Support groups and self-help groups thus became popular at a time when different expectations were being formulated about the relations between medical professionals and people diagnosed, and when new types of professionals and more social actors were becoming engaged in the provision of mental healthcare services (Norman, 2006). The 1980s inaugurated a lasting period of proliferation and diversification for self-help and (mutual) support groups in the US. For instance, a national survey conducted in 2002 revealed that there were 7467 organizations led by and for consumers of mental health services and their families, a substantial number compared to the 4546 traditional, professional-led mental health organizations (Goldstrom et al., 2006). In recent years, many self-help and support groups have also proliferated and diversified online (Kaufman & Whitehead, 2016) and the active role of "informed supporters" (Barak et al., 2009), that is, people diagnosed with the same mental health condition, in helping others with the same diagnosis by providing them with "more tailored feedback" (Barak et al., 2009:8) has become widely acknowledged. These activities have been shaped by the ways in which the provision of mental healthcare has been organized in the US and France, and by the challenges experienced by the mental healthcare systems in both countries, which I now briefly describe.

Mental Healthcare in the US and France

The development of different types of mental healthcare expertise and the dominant approaches to the study of mental health conditions also reverberated in the ways in which mental healthcare was provided. While asylums and psychiatric hospitals continued to be the main institutions focusing on the diagnosis and treatment of people diagnosed with mental health conditions throughout the first half of the twentieth century, important changes started to take place in the 1960s. In France, psychiatric expertise came under heavy criticism and mental healthcare came to be organized in sectors, with each sector providing care to roughly 70,000 adult inhabitants (Verdoux, 2003; Verdoux & Tignol, 2003). Developed largely in response to calls for reform made by the antipsychiatry movement (Castel, 1981), the sector was designed as a means through which mental healthcare could be provided by a multidisciplinary team of professionals headed by a psychiatrist. This team was expected to be familiar with the community and to be able to guide and assist the patient's reintegration, thereby importantly ensuring continuity of care (Coldefy, 2007; Petitjean, 2009). The events of May 1968 also marked a turning point for the standing of psychoanalysis in France, as it came to be widely adopted, both as a therapeutic approach and as a cultural phenomenon (Turkle, 1981).

In contrast, in the US, psychoanalysis was the object of criticism by the antipsychiatry movement along with psychiatry (Turkle, 1981) due to its medicalization and close integration in dominant institutions (Illlouz, 2008). In 1963 the Community Mental Health Act was signed in the US, which significantly changed the provision of mental healthcare through the establishment of community mental health centers throughout the country. As people diagnosed who had been previously treated in asylums and hospitals could receive mental healthcare services within their communities, this set into motion the process of de-institutionalization. Economic considerations played an important part in these developments, as the availability of new medications and therapeutic approaches rendered mental healthcare in the community more cost-effective. The process of deinstitutionalization unfolded at a higher rate

in the last few decades of the twentieth century, which led to new challenges for people diagnosed with health conditions and mental health professionals.

Even though the process of de-institutionalization was meant to improve the provision of mental healthcare and render it economical, over the last few decades, the French and the American healthcare systems have found themselves in a precarious state. In France, most citizens are insured and have free access to mental healthcare in the public sector. Although at the beginning of the twenty-first century, the French healthcare system was voted the best out of 191 nations (WHO, 2000), such an extraordinary ranking came at a very high cost. In 2013, for instance, roughly 10.9% of the country's GDP was allocated to the health sector (OECD Health Statistics, 2015). In the field of mental healthcare more specifically, the French government has been confronted with multiple challenges, leading researchers and journalists to note at various moments in time that French psychiatry was in crisis (Castel, 1981; Coffin, 2009; Pignarre, 2006) or that it was experiencing a "severe depression" (Le Monde, 2018). In 2008, mental health conditions represented about 32% of the country's overall disease burden (WHO, 2008) and their incidence has been steadily increasing (OECD, 2016), thereby placing tremendous pressure on the mental healthcare system. For instance, in 2016, 2.1 million patients were admitted either to one of the 3900 centers of medico-psychological expertise spread throughout France or to psychiatric hospitals (about 25%).

Although the process of deinstitutionalization has occurred at a much slower rate in France than in other countries (Petitjean, 2009), over the last three decades the number of hospital beds available for people diagnosed with mental health conditions has been reduced by 70%. Most of the state's budget for mental health continues, however, to be allocated to in-hospital forms of treatment (OECD, 2016; Petitjean, 2009), while outpatient alternatives are insufficient. Furthermore, the centers of medico-psychological expertise, which were developed along with the sector as a link between general practitioners and psychiatric hospitals, have been the victims of several restructuring measures brought about by reforms that will be discussed in more detail in the following chapter. The lack of personnel and other resources has thus led to considerable delays

in the provision of mental healthcare, as individuals experiencing symptoms may wait up to one year before having a first appointment, and has challenged the monitoring and timely modifications of treatment for the already registered patients. Furthermore, since the psychoanalytical model remained the dominant approach to mental health until the 2000s, some claim that the French mental healthcare system is characterized by "underdevelopment in community psychiatry, accessibility of mental health professionals trained in cognitive-behavioral psychotherapy, and psychiatric research" (Verdoux, 2003:85). Yet others criticize the "scientism" currently characterizing dominant approaches in the provision of mental healthcare in France and deplore the decline of psychoanalysis as the demise of one of the last "humanistic" approaches focusing on the individual within the full context of his/her own life (Roudinesco, 2019).

The discrepancies noted in terms of the availability of asylums at the beginning of this chapter resonate nowadays with significant differences between regions regarding the resources at their disposal, the distribution of outpatient clinics, and the number of existing mental hospitals (Coldefy et al., 2009; Coldefy, 2007; Provost & Bauer, 2001; Verdoux, 2003). The distribution of medical professionals is also skewed, with rural areas (Coldefy, 2007) and regions in Northern France (Petitjean, 2009; Verdoux, 2003) struggling due to a low number of specialists. Furthermore, while France was once the country with one of the highest number of psychiatrists in the world, their amount has been decreasing steadily, not only as the result of measures meant to render the provision of mental healthcare more efficient, but also because of the unpopularity of psychiatry as a specialization among young doctors. Thus, since 2012, the internship positions available in psychiatry have no longer been filled, with a turn for the worse signaled in 2019, when 17% of positions remained vacant, and only a minor improvement booked in 2020, when 11% of positions remained unoccupied (Raybaud, 2021). This is bound to affect people diagnosed with bipolar disorder or in need of such a diagnosis, since in France the diagnosis, treatment, and evaluation of the condition's evolution are determined by psychiatrists. General practitioners (GPs) play a different role, as they function as first points of contact and

subsequently as the ones who administer the treatment and who are frequently in touch with the patients.

The American mental healthcare system has also been confronted with important challenges (Boyle & Callahan, 1995). Unlike in France, deinstitutionalization occurred in the US at a very high rate. Yet, few solutions were put in place to enable people diagnosed to receive the care they needed within the community (Estroff, 1985/2001), and not many people knew about them, when such solutions existed (Grob, 2005). The situation worsened toward the turn of the century, prompting the chair of the President's New Freedom Commission on Mental Health to state in 2002 that "the system needs dramatic reform because it is incapable of efficiently delivering and financing effective treatments—such as medications, psychotherapies, and other services—that have taken decades to develop. Responsibility for these services is scattered among agencies, programs, and levels of government" (Hogan, in Gijswijt-Hofstra, 2002:156f). The delivery of cost-effective mental healthcare services continues to remain a problem, as spending has been increasing at alarming rates. In 2019, $225 billion was dedicated to this sector, marking an increase of 52% compared to the expenditure in 2009 (Open Minds Market Intelligence Report, 2019). At the same time, the delivery of mental healthcare continues to remain highly fragmented and insurance companies often distinguish between medical and behavioral types of interventions, prompting differences in facilities, data collection systems, and reimbursement requirements (Mou & Insel, 2021).

While some American people diagnosed with mental health conditions nowadays receive better quality care than they would have a few decades earlier, the system continues to be marked by important inequalities. Even though the passage of the Affordable Care Act has enabled more individuals to have access to healthcare, over 10% of the people diagnosed with mental health conditions continue to be uninsured (Mental Health America, 2022). Furthermore, the quality of care varies depending on one's type of insurance. For instance, the coverage provided by Medicare is limited, as it only enables access to about 25% of the mental healthcare professionals registered in the US. Moreover, it allows for a total of 190 days of in-hospital psychiatric care, even for people diagnosed with severe mental health conditions, such as bipolar

disorder. At the same time, only 56% of psychiatrists accept commercial insurances (Leonhardt, 2021). As a consequence, not all insured people diagnosed with mental health conditions have access to the same type of treatment (Hogan, 2003), with evidence indicating that the mental healthcare received by members of ethnic minorities continues to be limited and of lower quality (National Institute on Minority Health and Disparities, 2019; Kataoka et al., 2002).

There are also significant geographic differences in terms of access to mental healthcare, which echoes somewhat the situation in France. Thus, in different states, mental healthcare services are reimbursed to varying degrees, and managed care controls limit access to costly services while seeking to promote cheaper options more widely (Scheid, 2000). Not only does the availability of community services differ, but the system is also marked by important discrepancies regarding the number and type of medical professionals available (Mental Health Care Professional Shortage Areas (HPSAs), 2020), with more than 112 million Americans living nowadays in areas with few mental healthcare providers (Leonhardt, 2021). Thus, while in New York, Massachusetts, and Vermont there are more than 15 psychiatrists per 100,000 people, in Texas and Idaho there are fewer than 6 (Simon, 2015). Furthermore, there appear to be over 4000 areas across the US with only one psychiatrist for 30,000 people (Simon, 2015). These issues are further complicated by the fact that the overall number of psychiatrists available is bound to decrease over the coming years. This is due to a diminished interest among young medical doctors to specialize in psychiatry and to the upcoming retirement of a large number of psychiatrists, as 59% of them are 55 or older (National Council for Mental Wellbeing, 2017; Simon, 2015). In this context, matters are not made any easier by differences in legislation among states, which prevent mental healthcare practitioners from practicing everywhere in the US.

It is against this background that the Internet and, more recently, the development and spread of digital and AI-based technologies have led to great hopes that they may enhance the accessibility and quality of mental healthcare, both in the US and in France. At the same time, these technologies have also given rise to grave concerns about their potential to further inequalities and fragmentation. It is to these utopian and dystopian expectations that I now turn.

Digital and AI-Based Technologies in Mental Healthcare

A plethora of digital technologies, such as smart phones, smart clothes, smart pills, and wearables, contribute these days to the collection of different types of data and inform new hopes about the provision of mental healthcare (Bhugra et al., 2017; Bradstreet et al., 2019; Flore, 2021; Gooding, 2019; Mou & Insel, 2021; Pickersgill, 2019). For instance, a broad variety of stakeholders, ranging from governmental representatives[1] to medical professionals and members of the industry, believe that "automation using digital technology could improve the delivery and quality of care in psychiatry, and reduce costs" (Bauer et al., 2019:338). While many AI-based technologies are still at the stage of prototypes, the implementation and widespread use of digital technologies is bound to contribute to important changes in the understanding and approach to expertise about mental health. A review of recent publications that I have undertaken indicates that these technologies are expected to play a role in three main areas: (1) the identification of biomarkers, so that mental health conditions can be diagnosed earlier and more reliably; (2) the personalization of therapeutic approaches based on individual characteristics and the comprehensive and continuous monitoring of people diagnosed; and (3) the provision of existing treatment in new ways and the development of novel therapeutic approaches.

The search for objective criteria to establish mental health diagnoses, which started in the early days of the asylum, continues nowadays through the use of AI-based technologies. Thus, machine-learning algorithms are currently being trained in collaboration with psychiatrists to identify people with various mental health diagnoses at a prodromal stage, when symptoms have not yet manifested themselves clearly (Bauer et al., 2019; Miller, 2019; Rudin & Ustun, 2018; Shatte et al., 2019). Promising in this sense are various natural language processing algorithms, which are meant to analyze linguistic as well as paralinguistic aspects to help in diagnosis as well as in the prediction of an upcoming mental health

---

[1] In the US, the Department of Veterans Affairs and Department of Defense has developed mental health apps (Iagan et al., 2020).

episode. It is thus hoped that patterns of speech, one's vocabulary, as well as acoustic elements can be rendered legible as mental health markers and indicators. As we have seen in the first section of this chapter, a lot of attention has traditionally been paid to these elements in psychiatric expertise. What is new here, however, is the breadth and level of precision and granularity with which these elements are monitored, recorded, and assessed. This is often invoked as a cause for celebration by the technological companies involved in such developments, as the following quote illustrates: "With AI, our words will be a window into our mental health" (IBM, 2017).

Next to the development of reliable and objective criteria for diagnosis, the correct and timely identification of mood states has also received a lot of attention. Growing efforts have been made to combine digital behavior indicators with physiological data, and to link various patterns of engagement with digital technologies, such as the intensity and speed of smartphone keystrokes, the number and content of social media posts, and variations in voice patterns, with specific mood episodes. Thus, next to linguistic markers and voice analysis, elements of one's interactions with digital technologies are transformed into potential mental health symptoms. Such digital phenotyping[2] (Martinez-Martin et al., 2018) is also expected to contribute to a better understanding of an individual's reaction to a particular treatment and to increased treatment adherence.

The use of digital technologies in the provision of existing therapeutic approaches has been accompanied by visions whereby significant changes are operated in the frequency, length, and content of such therapies. For instance, proponents of Ecological Momentary Interventions (EMIs) have advocated for the provision of multiple psychological interventions or behavioral prompts spread throughout the day and informed by sensory data acquired through digital technologies (D'Alfonso, 2020). This way, the delivery of personalized therapy is understood as not only being attuned to a specific person, but also as adjustable to the particular context in which that person may find him/herself in and to the best timing

---

[2] Digital phenotyping is used by clinicians with the aim of creating objective parameters that correlate with diagnostic criteria by using extensive data about a person to refine diagnosis and predict behavior. It is a form of population monitoring/surveillance.

when it should be provided or ingested. There are also technologies which aim for the personalization of therapeutic interventions by facilitating common decision-making. Such technologies elicit information about each person's preferences, needs, and values and subsequently make it available to medical professionals, so that they can decide about the best medical treatment based, ideally, on a richer understanding of the person's symptoms, challenges, life circumstances, and goals. An example of such a digital decision-making aid is common ground, which was shaped by the experiential knowledge of its developer, who is allegedly diagnosed with a mental health condition. Importantly, many also hope that AI-based technologies will enable the development of novel therapeutic interventions based on an individual's genes, lifestyle, and other relevant environmental markers (Fernandes et al., 2017), thereby turning precision psychiatric medicine into a reality.

Digital and AI-based technologies have also contributed to changes in how already available therapeutic approaches are provided and by whom. Thus, the use of computers for the provision of various mental health services ranging from online chats to text messaging between people diagnosed with mental health conditions and medical professionals or other people diagnosed is widespread. Videoconferencing tools are being increasingly used to arrange mental healthcare appointments both in the US and in France, as many technological companies have started to develop technologies to address the geographic disparities in the provision of mental healthcare discussed above and to help save time for both mental healthcare practitioners and the people diagnosed. For instance, Doctolib, which is the current leader of digital healthcare services in France, as it comprises 80% of this market, launched a smartphone application in January 2019. The application allows people diagnosed with mental health conditions or experiencing symptoms to book video consultations with mental healthcare professionals of their choice, regardless of where they find themselves (Blaquière, 2019). The intention is to enhance convenience for both parties, as the times and dates at which different mental healthcare professionals are available are clearly indicated. While only medical professionals have to pay for the use of Doctolib and its application, in the US people diagnosed are required to

pay for online counseling services, but many of them, such as BetterHelp and Talkspace, are currently reimbursed by some insurance companies.

Chatbots are also becoming increasingly popular not only for mood tracking, but also for the provision of cognitive-behavioral therapy, mindfulness, and behavioral reinforcement. Of notoriety in France is the application My Sherpa, developed by Doctorpsy, which is claimed to have been downloaded by over 220,000 people. It allows people experiencing various mental health issues to access psychotherapy and to interact with a chatbot about their mental states. In the US and many other countries, numerous services are provided by three of the most prominent chatbots in mental healthcare—Tess, Wysa, and Woebot. Chatbots are seen as viable solutions for people diagnosed with mental health conditions who may have difficulties accessing conventional therapeutic services, and who may appreciate the constant availability of such "therapist robots" and their supposedly neutral, non-judgmental character. Furthermore, "machine counselors" have also been used rather successfully in suicide prevention services, and great hopes are attached to virtual therapeutic agents using avatar representations, such as ELLIE, which are meant to move beyond language processing and to engage in the analysis of nonverbal signals.

Digital and AI-based technologies are not only expected to contribute to better diagnosis and treatment, but also expected to bring about important changes in the work of medical professionals and in their relations to people diagnosed. For instance, many hope AI will help improve the quality of care by reducing clinicians' paperwork-related workload and by summarizing important information from a person's patient record. Whereas monitoring devices are often discussed in relation to acquiring insights into people's physical and mood states, some have also been implemented to keep an eye on the mental healthcare provided by professionals. For instance, in the US "Electronic Visit Verification" is used to log in the precise duration of home visits by mental health service providers (Olowu, 2015). Importantly, the widespread use of digital technologies in mental health may be accompanied by the blurring of numerous categories, given their more malleable character. For instance, depending on the context of use, a digital pill may be a digital treatment, but it may also be a form of surveillance or control (Cosgrove et al.,

2020). Such blurring of boundaries may lead to challenges for the ways in which expertise is performed, and may require new sets of skills to navigate the changes they may bring to the relations between people diagnosed and mental healthcare professionals. It may also require both groups to acquire greater insights into the available legislation, in order to better understand how such technologies and the data acquired through them can be used and shared.

Whereas proponents of AI and digital technologies in mental healthcare are enthusiastic about the transformations their implementation could lead to, critics have drawn attention to some problematic aspects regarding their (future) use (Fiske et al., 2019). Since many of these concerns are also valid in relation to the data currently collected from online platforms such as those that this book focuses on, they will be discussed in more detail, as they are important to consider when engaging with the insights provided in the next chapters. The main types of criticism identified focus on the feasibility and efficiency of the collaborations required, the quality of the data, and the epistemic character of the insights that can be derived through the use of digital technologies. Thus, some commentators (Carr, 2020; Pasquale, 2020) have emphasized that the responsible and reliable development, assessment, and implementation of such technologies require the collaboration of a diverse community of experts, including researchers, clinicians, regulators, and people diagnosed. This is bound to be an arduous process, as the development of a common understanding, familiarity with core approaches in each discipline, new research methods, and novel ways to redistribute responsibility will likely be required.

Other scholars have raised concerns about the type of data that can be obtained and from whom and the consequences this may lead to. Thus, the data that are currently collected through monitoring devices and used to train algorithms that are supposed to help in decision-making do not (sufficiently) capture personal, social, cultural, and economic factors, yet these importantly shape one's mental state (Birk & Samuel, 2020; Bradstreet et al., 2019). This situation is partly due to the quantitative logic underlying these technologies, as they mainly record aspects that can be measured and analyzed through statistical methods. At the same time, it is also informed by the biological language surrounding digital pheno-typing, which orients attention in particular directions and may thus lead

to the reification of mental health conditions as biological (Birk & Samuel, 2020). From this point of view, Bemme et al. (2020, not paginated) convincingly warned that "[t]he quest for holism through big data may thus lead to a re-emergence of the tyranny of reductionism." Apart from the decontextualization and reductionism that might be operated through digital data collection practices, scholars have also warned about important inequalities among people diagnosed with mental health conditions in terms of access and representation. While in the days of the asylum, mostly the poor and the destitute were overrepresented in the data collected (Porter, 2018), nowadays socioeconomic status and location inform the availability of data, as almost half of the world's population still does not have access to the Internet and digital technologies. Another problematic aspect is that thus far people diagnosed with mental health conditions and their carers have not been involved in the development of AI-based interventions (Bradstreet et al., 2019). Bradstreet et al. (2019:128) warned in this sense that "[t]here are risks of replicating existing and even creating new inequalities in health and mental health as well as risks that new forms of coercion or compulsory treatment could emerge. Scrutiny, transparency and algorithmic accountability are essential."

Noteworthy concerns have also been raised about the epistemic character of the insights acquired from such data and the validity of the decisions based on them. For instance, critics have highlighted that algorithms are trained on insights acquired through the subjective and selective work of human professionals. From this point of view, algorithms are not objective, as they reflect current hierarchies of knowledge and patterns of exploitation in their functioning (Bemme et al., 2020). Another relevant perspective is provided by Coghlan and D'Alfonso (2021), who put forward four types of possible relations between the information generated using digital devices and mental health phenomena: two types of causal relations, a correlative and a constitutive relation. Through these four scenarios, Coghlan and D'Alfonso (2021) show that the availability of data collected through digital technologies does not automatically lead to reliable insights about people's mental health. To arrive at the latter, inferences need to be made and their quality depends on the availability of accurate and precise definitions, adequate measurement tools, the possibility to correctly identify distorting effects, and the opportunity to draw

upon additional types of data. Thus, while digital phenotyping may contribute to new and more reliable knowledge about mental health, caution is needed not to misinterpret and misrepresent the epistemic character of the data collected through digital technologies. This is particularly important, given that algorithms have thus far had a hard time distinguishing between different disease categories from the same data, while people diagnosed with mental health conditions present a high level of comorbidity (Birk & Samuel, 2020).

Criticism regarding the use of AI and digital technologies in mental healthcare has also focused on the changes they have prompted to the ways in which the psychiatric subject can be constituted and studied. In this sense, scholars have highlighted the blurring of boundaries between those who make and who are made by the data collected through such tools. They have also argued that the real-time collection of different types of psychological data and the countless possibilities to aggregate them contribute to the development of an "aggregate human" that defies stable categories as well as micro and macro distinctions (Bemme et al., 2020). This raises questions about the types of mental healthcare that would be appropriate for such a human and about the methods through which s/he can best be studied.

Other scholars have noted the relatively narrow domain of application of these digital technologies, as most technological companies have focused their investments on tools meant to alleviate mild to moderate symptoms and have manifested less interest for the development of instruments able to address the more severe symptoms of conditions such as bipolar disorder or schizophrenia. This way, those who most need mental healthcare services might be further disadvantaged and the widespread use of digital tools will most likely fail to contribute to curbing current mental healthcare costs (Mou & Insel, 2021). Furthermore, considerable doubts have also been expressed about the quality of the therapeutic approaches enabled through these technologies, as several reviews have indicated that many of the technologies and applications that people diagnosed with mental health conditions can access freely or at a low cost have not been scientifically tested or have only been assessed through short, small-scale studies.

Whereas numerous mobile phone applications are available for use for people diagnosed with various mental health conditions (Faurholt-Jepsen et al., 2018; Faurholt-Jepsen et al., 2019) and are downloaded millions of times per month (Marathe & Ravi, 2020; Nicholas et al., 2015), their quality can vary widely and they are much less regulated than medicine-based treatments. Furthermore, since most information available thus far consists of engagement metrics, there is limited understanding about the ways in which these technologies shape the quality of mental healthcare care. While some people diagnosed may feel empowered to use digital technologies to better understand and manage their conditions, others may feel overwhelmed. Important questions have also been raised about the long-term impact of such technologies on people's abilities to manage their mental health, with some critics worrying that intensive engagement with digital technologies may lead to "de-skilling," as individuals would come to rely more on these tools and spend less time and effort actively managing their condition. Thus, even in the case of applications and digital technologies of proven quality, it is unclear how to optimally deploy them in practice, and how the preferences of individuals diagnosed with mental health conditions and the specificity of their daily lives could best be considered in this sense.

Numerous critics have also raised concerns about various legal and regulatory aspects in regard to the use of digital technologies. Thus, many commentators have highlighted the highly intrusive character of these devices (Carr, 2020), as they imply continuous video and audio monitoring, which makes their acceptability questionable. In this sense, Guta et al. (2018) argued that such technologies should be seen as part of a "larger integrated surveillance apparatus" or of a "digital medicine panopticon," which focuses on already marginalized communities. People diagnosed with mental health conditions enjoy different degrees of legal protection in this sense, depending on the country they live in. For instance, in France and other countries of the European Union, the General Data Protection Regulation (GDPR) should afford them greater protection, whereas in the US the legal provisions available remain limited and differ among states. Other critics (Carr, 2020) have raised concerns about the degree to which people diagnosed with mental health conditions, whose state can fluctuate over time, can give informed

consent and about the time frame within which such consent could be considered valid. Another important concern stems from the fact that data collected through such technologies could become available to third parties who may use it in a discriminatory fashion or in other ways disadvantageous to the individuals from which they have been collected. Such data are already collected and used in the judiciary, as some people with mental health conditions who would otherwise be hospitalized or incarcerated are allowed to stay home under GPS monitoring (Boone et al., 2017). While at first glance such digital approaches may seem more humane and affording better care, there are also concerns that they may entail new types of coercive measures, including the mandatory sharing of mental healthcare information, such as the number of hospitalizations or suicidal behavior, across institutions. Some commentators therefore expect digital technologies to be intensively used in coercive psychiatric interventions (Gooding, 2019).

The developments described here sketch the conditions of possibility for the epistemic practices that this book focuses on. The online performances of expertise about bipolar disorder to which we will now turn our attention carry therefore vestiges of the different theoretical approaches that shaped the development of knowledge about mental health, of the various tools and instruments used for the collection of data that have been discussed in the first part of this chapter. They are also shaped by the new practices and forms of knowledge that digital technologies currently allow for and by the hopes and fears that AI-based technologies have generated among different stakeholders. How expertise about bipolar disorder is performed in this context by official bodies in the US and France is discussed at length in the following chapter.

References

American Psychiatric Association. (2013). Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5).

American Psychiatric Association. (1968). Diagnostic and Statistical Manual of Mental Disorders, second edition (DSM-II).

Arribas-Ayllon, M., Bartlett, A., & Lewis, J. (2019). *Psychiatric Genetics. From Hereditary Madness to Big Biology*. Routledge.

Barak, A., Klein, B., & Proudfoot, J. (2009). Defining Internet-Supported Therapeutic Interventions. *Annals of Behavioral Medicine, 38*(1), 4–17.

Baron, M., Risch, N., Hamburger, R., et al. (1987). Genetic Linkage between X- chromosome Markers And Bipolar Affective Illness. *Nature, 326*, 289–292.

Bauer, M., Monteith, S., Geddes, J., Gitlin, M. J., Grof, P., Whybrow, P. C., & Glenn, T. (2019). Automation to Optimise Physician Treatment of Individual Patients: Examples in Psychiatry. *The Lancet Psychiatry, 6*(4), 338–349.

Bemme, D., Brenman, N., & Semel, B. (2020, October 13). The Subjects of Digital Psychiatry'. *Somatosphere*. Available at http://somatosphere.net/2020/subjects-of-digital-psychiatry.html/.

Bernadet, P., Douraki, T., & Vaillant, C. (2002). *Psychiatrie, Droits de l'Homme et Défense des Usagers en Europe*. Écrès.

Bhugra, D., Tasman, A., Pathare, S., Priebe, S., Smith, S., Torous, J., et al. (2017). The WPA-Lancet Psychiatry Commission on the Future of Psychiatry. *The Lancet Psychiatry, 4*(10), 775–818.

Birk, R., & Samuel, G. (2020). Can Digital Data Diagnose Mental Health Problems? A Sociological Exploration of 'Digital Phenotyping'. *Sociology of Health & Illness, 42*(8), 1873–1887.

Blaquière, J. (2019, January 14). Doctolib se lance dans la téléconsultation. *Le Figaro*. Available at https://www.lefigaro.fr/societes/2019/01/14/20005-20190114ARTFIG 00128-doctolib-se-lance-dans-la-teleconsultation.php

Boone, M., van der Kooij, M., & Rap, S. (2017). The Highly Reintegrative Approach of Electronic Monitoring in the Netherlands. *European Journal of Probation, 9*(1), 46–61.

Boyle, P., & Callahan, D. (1995). Managed Care in Mental Health: The Ethical Issues. *Health Affairs, 14*, 7–23.

Bradstreet, S., Allan, S., & Gumley, A. (2019). Adverse Event Monitoring in mHealth for Psychosis Interventions Provides an Important Opportunity for Learning. *Journal of Mental Health, 28*(5), 461–466.

Brown, P. (1988). *The Transfer of Care: Psychiatric Deinstitutionalization and Its Aftermath*. Routledge Kegan & Paul.

Caisse Nationale de Solidarité pour l'Autonomie (CNSA) (2017, Mai). Les GEM. Groupes d'entraide mutuelle. *Les cahiers pédagogiques de la CNSA*.

Carr, S. (2020). 'AI gone mental': Engagement and Ethics in Data-driven Technology for Mental Health. *Journal of Mental Health, 29*(2), 125–130.

Castel, R. (1981). *La Gestion des Risques. De l'Anti-Psychiatrie à l'Après-Psychanalyse*. Minuit.

Coffin, J.-C. (2009). La Psychiatrie par Temps de Crise. *Études, 6*(410), 751–761.

Coghlan, S., & D'Alfonso, S. (2021). Digital Phenotyping: An Epistemic and Methodological Analysis. *Philosophy & Technology, 34*(4), 1905–1928.

Coldefy, M. (Ed.). (2007). *La Prise en Charge de la Santé Mentale. Recueil d'Études Statistiques*. La Documentation Française.

Coldefy, M., Le Fur, P., Lucas-Gabrielli, V., & Mousquès, J. (2009). Une Mise en Perspective de l'Offre de Soins des Secteurs de Psychiatrie Générale et du Recours à la Medicine Générale. *Pratiques et Organization des Soins, 40*(3), 197–206.

Cosgrove, L., Karter, J., McGinley, M., & Morrill, Z. (2020). Digital Phenotyping and Digital Psychotropic Drugs: Mental Health Surveillance Tools That Threaten Human Rights. *Health and Human Rights, 22*(2), 33–39.

D'Alfonso, S. (2020). AI and Mental Health. *Current Opinion in Psychology, 36*, 112–117.

Dincin, J. (1975). Psychiatric Rehabilitation. *Schizophrenia Bulletin, 13*, 131–147.

Egeland, J. A., Gerhard, D. S., Pauls, D. L., et al. (1987). Bipolar Affective Disorder Linked to DNA Markers on Chromosome 11. *Nature, 325*, 783–787.

Estroff S (1985/2001) Making it Crazy. An Ethnography of Psychiatric Clients in an American Community 2nd ed. : University of California Press.

Faurholt-Jepsen, M., Bauer, M., & Kessing, L. (2018). Smartphone-Based Objective Monitoring in Bipolar Disorder: Status and Considerations. *International Journal of Bipolar Disorders, 6*, 6.

Faurholt-Jepsen, M., Torri, E., Cobo, J., et al. (2019). Smart-phone based Self-monitoring in Bipolar Disorder: Evaluation of Usability and Feasibility of Two Systems. *Journal of Bipolar Disorders, 7*(1), 1–11.

Fernandes, B. S., Williams, L. M., Steiner, J., Leboyer, M., Carvalho, A. F., & Berk, M. (2017). The New Field of 'Precision Psychiatry. *BMC Medicine, 15*(1), 80.

Fiske, A., Henningsen, P., & Buyx, A. (2019). Your Robot Therapist Will See You Now: Ethical Implications of Embodied Artificial Intelligence in Psychiatry, Psychology, and Psychotherapy. *Journal of Medical Internet Research, 21*(5), 1–12.

Flore, J. (2021). Ingestible Sensors, Data, and Pharmaceuticals: Subjectivity in the Era of Digital Mental Health. *New Media & Society*, 1–18.

Foucault M (1972/2010). *History of Madness*. : Routledge. Translated by Jonathan Murphy and Jean Khalfa.

Freud S (1917/2005) On Murder, Mourning and Melancholia. : Penguin Books. Trans. by Shaun Whiteside

Girard, V. (2008). Dossier n° 13- Auto Support en Santé Mentale en France. *Bulletin Amades, 75*, 1–9.

Goldstrom, I., Campbell, J., Rogers, J., Lambert, D., Blacklow, B., Henderseon, M., & Manderscheid, R. (2006). National Estimates for Mental Health Mutual Support Groups, Self-Help Organizations, and Consumer-Operated Services. *Administration and Policy in Mental Health and Mental Health Services Research, 33*(1), 92–103.

Gooding, P. (2019). Mapping the Rise of Digital Mental Health Technologies: Emerging Issues for Law and Society. *International Journal of Law and Psychiatry, 67*, 1–11.

Grob, G. (2005). The Transformation of Mental Health Policy in Twentieth-Century America. In M. Gijswijt-Hofstra, H. Oosterhuis, J. Vijselaar, & H. Freeman (Eds.), *Psychiatry and Mental Health Care in the Twentieth-Century: Comparisons and Approaches* (pp. 141–161). Amsterdam University Press.

Guta, A., Voronka, J., & Gagnon, M. (2018). Resisting the Digital Medicine Panopticon: Toward a Bioethics of the Oppressed. *The American Journal of Bioethics, 18*(9), 62–64.

Healy, D. (2008). *Mania: A Short History of Bipolar Disorder*. John Hopkins University Press.

Hochmann, J. (2017). *Histoire de la Psychiatrie. Paris: Presses Universitaires de France* (4th ed.).

Hogan, M. (2003). The President's New Freedom Commission: Recommendations to Transform Mental Health Care in America. *Psychiatric Services, 54*(11), 1467–1474.

Hogan, M., & to President George W Bush. (2002). Interim Report of the President's New Freedom Commission on Mental Health. In M. Gijswijt-Hofstra, H. Oosterhuis, J. Vijselaar, & H. Freeman (Eds.), *Psychiatric Cultures Compared. Psychiatry and Mental Health Care* (p. 156). Amsterdam University Press.

IBM Research Editorial Staff (January 5, 2017). 'IBM 5 in 5: With AI, our words will be a window into our mental health.' Retrieved from: https://www.ibm.com/blogs/research/2017/01/ibm-5-in-5-our-words-will-be-the-windows-to-our-mental-health/. Accessed on 23.09.2021

Illlouz, E. (2008). *Saving the Modern Soul. Therapy, Emotions, and the Culture of Self-Help*. University of California Press.

Kataoka, S., Zhang, L., & Wells, K. (2002). Unmet Need for Mental Health Care Among U.S. Children: Variation by Ethnicity and Insurance Status. *American Journal of Psychiatry, 159*, 1548–1555.

Kaufman, S., & Whitehead, K. (2016). Producing, Ratifying, and Resisting Support in an Online Support Forum. *Health*, 1–17. Advance online publication. https://doi.org/10.1177/1363459315628043

Lagan, S., Ramakrishnan, A., Lamont, E. *et al.* (2020). Digital Health Developments and Drawbacks: A Review and Analysis of Top-Returned Apps for Bipolar Disorder. *Int J Bipolar Disord, 8*, 39. https://doi.org/10.1186/s40345-020-00202-4

Laval, C. (2015). Edito. *Rhizome, 58*(4), 1–2.

Le Monde. (2018, August 18). *La Psychiatrie, un secteur en état d'urgence*. Available at https://www.lemonde.fr/idees/article/2018/08/18/la-psychiatrie-un-secteur-en-etat-d-urgence_5343765_3232.html

Leonhardt, M. (2021, May 10). *What You Need to Know About the Cost and Accessibility of Mental Health Care in America*. Available at https://www.cnbc.com/2021/05/10/cost-and-accessibility-of-mental-health-care-in-america.html

Marathe, P., & Ravi, S. (2020, December 8). The Mental Health Dilemma: If Technology is the Problem, Can it also be the Solution?. *STAT News*. Available at https://www.statnews.com/2020/12/08/mental-health-dilemma-technology-cause-and-solution/

Martinez-Martin, N., Insel, T., Dagum, P., Greely, H., & Cho, M. (2018). Data Mining for Health: Staking Out the Ethical Territory of Digital Phenotyping. *Npj Digital Medicine, 1*(1), Article 68.

McCosker, A. (2018). Engaging Mental Health Online: Insights from *beyondblue*'s forum influencers. *New Media & Society, 20*(12), 4748–4764.

Mental Health America. (2022). *The State of Mental Health in America*. Available at https://mhanational.org/issues/state-mental-health-america

Mental Health Care Health Professional Shortage Areas (HPSAs). (2020). Available at Mental Health Care Health Professional Shortage Areas (HPSAs) | KFF

Miller, K. (2019). A Matter of Perspective: Discrimination, bias and in- equality in AI. In T. Walsh (Ed.), *Closer to the Machine. Technical, Social, and Legal Aspects of AI*. Office of the Victorian Information Commissioner. Available at https://ovic.vic.gov.au/wp-content/uploads/2019/08/closer-to-the-machine-web.pdf

Mou, D., & Insel, R. (2021, January 19). *Startups Should Focus on Innovations that Truly Improve Mental Health*. Available at https://www.statnews.com/2021/01/19/startups-innovations-truly-improve-mental-health/

National Council for Mental Wellbeing. (2017). *The Psychiatric Shortage. Causes and Solutions*. Available at https://www.thenationalcouncil.org/wp-content/uploads/2017/03/Psychiatric-Shortage_National-Council-.pdf?daf=375ateTbd56

Nicholas, J., Larsen, M., Proudfoot, J., & Christensen, H. (2015). Mobile Apps for Bipolar Disorder: A Systematic Review of Features and Content Quality. *Journal of Medical Internet Research, 17*(8), e198.

Norman, C. (2006). The Fountain House Movement, an Alternative Rehabilitation Model for People with Mental Health Problems, Members' Descriptions of What Works. *Scandinavian Journal of Caring Science, 20*, 184–192.

OECD. (2015). *Country Note: How does health spending in FRANCE compare?* OECD Health Statistics.

OECD. (2016). *Health Policy in France. OECD Health Policy Overview*. OECD.

Olowu, A. (2015). Delivering Proof of Care at the Point of Care. How Electronic Visit Verification Can Benefit Clinicians, Home Health Workers and Patients. *Health Management Technology, 36*(4), 16.

Open Minds. (2019). *The U.S. Mental Health Market: $225.1 Billion In Spending*. Market Intelligence Report.

Pasquale, F. (2020). *New Laws of Robotics. Defending Human Expertise in the Age of AI*. The Belknap Press of Harvard University Press.

Petitjean, F. (2009). The Sectorization System in France. *International Journal of Mental Health, 38*(4), 25–38.

Pickersgill, M. (2019). Digitising Psychiatry? Sociotechnical Expectations, Performative Nominalism and Biomedical Virtue in (Digital) Psychiatric Praxis. *Sociology of Health & Illness, 41*(1), 16–30.

Pignarre, P. (2006). *Les Malheurs des Psys. Psychotropes et Médicalisation du Social*. La Découverte.

Porter, T. (2018). *Genetics in the Madhouse. The Unknown History of Human Heredity*. Princeton University Press.

Provost, D., & Bauer, A. (2001). Trends and Developments in Public Psychiatry in France since 1975. *Acta Psychiatrica Scandinavica, 104*(410), 63–68.

Raybaud, A. (2021, June 16). Chez les étudiants en medicine, la psychiatrie plus délaissée que jamais. *Le Monde*. Available at https://www.lemonde.fr/campus/article/2021/06/16/chez-les-etudiants-en-medecine-la-psychiatrie-plus-delaissee-que-jamais_6084290_4401467.html

Rose, N. (2018). *Our Psychiatric Futures*. Polity Press.

Roudinesco, E. (2019, February 8). Les psychanalystes ont contribué à leur propre déclin. *Le Monde*.

Rudin, C., & Ustun, B. (2018). Optimized Scoring Systems: Toward Trust in Machine Learning for Healthcare and Criminal Justice. *Interfaces, 48*(5), 449–466.

Scheid, T. (2000). Rethinking Professional Prerogative: Managed Mental Health Care Providers. *Sociology of Health & Illness, 22*(5), 700–719.

Shatte, A., Hutchinson, D., & Teague, S. (2019). Machine Learning in Mental Health: A Scoping Review of Methods and Applications. *Psychological Medicine, 49*, 1426–1448.

Simon, C. (2015, September 9). US Faces Severe Shortage of Psychiatrists as Demand Grows-Report. *RT News*. Accessed August 12, 2017, from https://www.rt.com/usa/314777-us-shortage-psychiatrists-demand-grows/

Swain, G. (1988). *Le Sujet de la Folie. Naissance de la Psychiatrie*. Privat.

Troisoeufs, A., & Eyraud, B. (2015). Psychiatrisés en Lutte, Usagers, Gemeurs…: Une Cartographie des Différentes Formes de Participation. *Rhizome, 58*(4), 3–4.

Turkle, S. (1981). *Psychoanalytic Politics. Freud's French Revolution*. The MIT Press.

Verdoux, H. (2003). Psychiatry in France. *International Journal of Social Psychiatry, 49*(2), 83–86.

Verdoux, H., & Tignol, J. (2003). Focus on Psychiatry in France. *British Journal of Psychiatry, 183*, 466–471.

WHO. (2000). *Health Systems: Improving Performance*. World Health Report 2000. World Health Organization.

WHO. (2008). *The Global Burden of Disease: 2004 update*. World Health Organization.