



## CHAPTER 2

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# Mental Health

*Let us suppose [...] that the collective human spirit resembles a great oyster. My goal is to extract the pearl. The pearl is reason itself, pure sanity. I must therefore define the precise boundaries of what is reasonable; anything else is madness, madness pure and simple. And here is the definition. Sanity is the perfect equilibrium of all the faculties, neither more, nor less.*

—Joaquim Maria Machado de Assis (1839–1908), *famous Brazilian author (Machado de Assis, 1882/2013, p. 86)*

**Abstract** This chapter introduces the notion of mental health as it is presently understood in the *Diagnostic and Statistical Manual of Mental Disorders (DSM)*, which is published by the American Psychiatric Association. This is then discussed from the perspective of three philosophical stances, namely essentialism, social constructionism, and pragmatism. Historical examples—such as drapetomania, homosexuality, and schizophrenia—illustrate how culture, in particular thoughts about race, sexuality, and civil rights, can shape views on what is mentally normal and what not. Anticipating the later chapter on substance use, addiction receives special attention. Practical ways to assess dependence and also its definition in the *DSM* are introduced. Finally, the epidemiology of mental disorders is discussed. The question of whether the prevalence of these disorders is increasing is of special relevance. The chapter’s interim conclusion is that mental disorders should be better understood as dynamic

biopsychosocial processes which can continually change; they are thus not concrete things (e.g., brain disorders).

**Keywords** DSM • Essentialism • Social constructionism • Addiction • Drug dependence • Mental disorders • Reification

The introductory quote is taken from the novella *The Alienist*, written by Machado de Assis toward the end of the nineteenth century. The “alienist” of the title, now an uncommon term, described the medical professionals who dealt with people’s “alienation” from their (alleged) “true self”. The term was later replaced by “psychiatrist”, taken from the German language (Bynum, 1994). Machado de Assis’s story is about a physician and scientist who, after being educated at the leading universities of Portugal and Spain, returns to his home country of Brazil to investigate mental health. The doctor’s first attempt to distinguish sanity from madness is to define the former as the perfect equilibrium of all (mental) faculties. However, when he finds out that this means placing four-fifths of the local population in a mental asylum, the alienist revises his view. As a true scientist who applies statistical methods, he calculates that a disequilibrium of the mental faculties must instead be normal. This then becomes the new definition of sanity. Accordingly, the people in the asylum are released to make beds available for the remaining fifth of the local population (Machado de Assis, 1882/2013).

Although this is a fictitious example from a different time and culture, the question of *what constitutes mental health and mental disorders* is still important 140 years later. The answer is essential for our subject, as a deviation from the norm can be seen as justifying a clinical diagnosis, followed by psychological/psychiatric therapy and, often, psychopharmacological treatment. Defining “mental health” is as complex as defining what constitutes “normalcy”, or “mind”, or the subject matter of psychology and psychiatry. Fortunately, however, this does not make the answers completely arbitrary. In this chapter, we will learn about a few viable options. For example, the researchers who proposed the new definition of health and identified its “six pillars”, mentioned in the introduction, have further deconstructed the pillar of “mental functions & perception” into cognitive functioning, emotional state, esteem/self-respect, feeling in charge/manageability, self-management, understanding one’s situation/comprehensibility, and resilience (Huber et al., 2016). Their approach broadens the perspective for further research and policy on health.

## The *DSM*

For actual clinical practice in psychology and psychiatry, it is more useful to have a look at the *Diagnostic and Statistical Manual of Mental Disorders (DSM)*, edited by the American Psychiatric Association (APA). Its most recent version, the *DSM-5-TR* (APA, 2022), was published in March 2022. This handbook is best known for its hundreds of classifications of mental disorders in terms of checklists, some of which we will analyze in more detail below. It is less known for its tentative definition of what a mental disorder is, which we will discuss shortly. But first, it helps to know something of the manual's history.

During the two world wars of the twentieth century, the psychological assessment of soldiers proved to be a useful means of predicting the jobs and situations in which the servicemen would function well. An important aspect of this was mental health. In this tradition, the APA decided to develop a diagnostic manual for their domain (i.e., psychiatry), which was published in 1952 as the *DSM-I*. This edition and the second one of 1968 reflected the then prevailing Freudian view of mental disorders, including assumptions about their causes: primarily parent–child conflicts. Throughout the 1970s, however, psychiatric researchers became increasingly dissatisfied with this model. They wanted to develop a scientific version of the manual, eliminating speculation and increasing the inter-rater reliability, that is, the likelihood that any two clinicians would give a patient the same diagnosis (see Shorter, 2015).

A historical role model for this endeavor was the German psychiatrist Emil Kraepelin (1856–1926), who had distinguished only two mental disorders—precursors of what we now call major depressive disorder and schizophrenia—and tried to explain these in terms of brain damage. Psychiatrists in the 1970s hoped that breakthroughs in genetics and the newly emerging field of neuroscience would eventually allow them to objectify diagnosis in their domain. To meet the advocated scientific standards, the *DSM-III* that was published in 1980 no longer contained a causal theory (*etiology*, in technical terms), but only the symptom checklists that we still have today. These are complemented by information on the characteristics and prevalence for each category.

## The Official Account

It is important to realize that this situation remained unchanged in the subsequent editions, including the most recent *DSM-5-TR* of 2022. This means that while a good deal of information has been gathered about risk factors, we still do not know in a strict sense what the causes of mental disorders are. This makes some psychiatrists worry that their field might be taken less seriously than other domains of medicine where there is greater knowledge of the causes of diseases available, as well as biological and—in this sense less subjective—diagnostic tools (Kendler, 2016). If we bear this in mind, we will better understand the tentative and pragmatic nature of the APA’s official account as to what constitutes mental disorders:

*A mental disorder* is a syndrome characterized by clinically significant disturbance in an individual’s cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning. Mental disorders are usually associated with significant distress or disability in social, occupational, or other important activities. An expectable or culturally approved response to a common stressor or loss, such as the death of a loved one, is not a mental disorder. Socially deviant behavior (e.g., political, religious, or sexual) and conflicts that are primarily between the individual and society are not mental disorders [...]. (APA, 2022)<sup>1</sup>

The authors concede that this is only an approximation. Nevertheless, taking a closer look at this working definition will tell us a lot about mental health: Firstly, it is important to understand that there is no objective standard for “clinical significance”. It is ultimately up to the clinical experts to assess the severity of a person’s problems—and particularly whether they deserve or even require professional help, for which a diagnosis is then given. Secondly, the subsequent listing of cognition, emotion and behavior on the one hand and psychology, biology, and development on the other can be said to describe the purview of psychology and psychiatry. It is true, again, that this is a pragmatic decision, and valid questions could be raised about the boundary with, say, neurology (Schleim, 2009). But we must presume *something* if we do not simply wish to engage in endless foundational discussions.

<sup>1</sup>I am quoting from the online version at <https://dsm.psychiatryonline.org> and cannot therefore provide page numbers.

Thirdly, suffering and/or impairment in everyday life are essential aspects of mental disorders. While the authors state that disorders are “usually associated” with these aspects, it is a rather philosophical question as to whether we can speak of the presence of a mental disorder if there is neither suffering nor impairment. Fourthly, the fact that “expectable or culturally approved responses” are exempted further emphasizes the normative nature of this definition. Note that “clinical significance” already expressed a norm (see also Stier, 2013; Tebartz van Elst, 2021). The fifth and last point requires that mental disorders are not primarily about a conflict between the individual and society. Why this is added so prominently here will become clearer when we discuss some historical examples later in this chapter.

Some readers may be surprised that the definition differs from what they have been told about mental disorders. Perhaps they believed that these disorders are medical diseases caused by a certain biological dysfunction, such as a biochemical imbalance in the brain, a genetic defect, or faulty neural circuits. That last notion was literally communicated to a broader audience several years ago by no less a person than Thomas Insel, at that time director of the US National Institute of Mental Health, probably the world’s largest psychiatric research institution (Insel, 2010). His successor reinforced this idea a little later in a scientific publication and described the discipline as “circuit psychiatry” (Gordon, 2016).

It is thus important to understand that the definition that we discussed briefly above—which makes no reference at all to “circuits”—is not proposed by someone from, say, the anti-psychiatry movement. Instead, it is—and has been for decades—the official account of the American Psychiatric Association. When we learn about classic views to make sense of things in the next section, it will become clearer why experts can have such different understandings of mental disorders. The fact that the authors of the DSM actually called them “syndromes” further emphasizes the tentativeness of the definition.

## 2.1 THREE CLASSIC VIEWS TO MAKE SENSE OF THINGS

Science—as well as its predecessor natural philosophy, at least since Aristotle (384–322 BC)—has always attempted to categorize and classify things in the world, to develop *taxonomies*. Plants, for example, were distinguished according to their growth and flowering patterns, what they looked like (their *morphology*), and, more recently, on the basis of their

genome. Likewise, animals were not always separated into categories such as vertebrates, which includes amphibians, birds, fish, mammals, and reptiles, but in earlier times they were separated according to whether they had fur or were furless, had blood or were bloodless, how many legs they had, and so on (Kendler, 2009). This exemplifies how people used what they knew and believed to make sense of the world around them.

The *DSM* is also a classification system, albeit for psychological problems. The categorization is intended to help clinical experts to understand and explain a patient's situation, to guide therapy, and to provide information about the prognosis. From a philosophical point of view, we can discuss three more general accounts to distinguish things, all with their own answers about how to build a classification system: *essentialism*, *social constructionism*, and *pragmatism*. We will learn about their meaning, benefits and limitations in this section.

### *Essentialism*

Essentialism assumes that things have an intrinsic quality, an *essence*, to distinguish them. The standard model for this is the periodic table of the chemical elements, based on their atomic number (i.e., the number of protons). For example, something is iron if—and only if—it has 26 protons. It is not simply that atoms with so many protons are on average iron or that they sometimes have 24 (chromium) or 47 (silver). It is really quite straightforward: If an atom has precisely that number, it is iron; otherwise, it has to be something else. Note that this presumes philosophical *realism*, the view that there is an outside world that is independent of us conscious beings. It is not just by virtue of *our* counting and describing protons that something is iron and something else is not; this also implies that the chemical elements were like this before we started to investigate them scientifically, in fact even before any humans existed.

This straightforwardness is essentialism's huge advantage. If you want to find out what kind of thing something is, you simply look at its essence. As simple and clear as this might seem, it is also very limited. In the world of biology, for example, things quickly become so complex and variable that we lack a straightforward answer to the question of what constitutes their essences. Such cases also exist in the domain of inanimate physics: For example, it is both entertaining and educational to learn about the

different attempts that physicists specializing in crystal structures have made to classify snowflakes.<sup>2</sup>

But why is this relevant to the classification of mental disorders? Around the year 1900, when Kraepelin's influence was at its peak, the discovery that progressive paralysis and other severe psychological symptoms—such as depression, mania, and psychoses—could be caused by infection with the bacterium *Treponema pallidum*, better known as the disease syphilis, had a huge impact on the medical world (Kendler et al., 2011). At last there was an example of how biological pathology could cause mental pathology! This also had major implications for patients. Thanks to the discovery of the antibacterial effects of penicillin a few decades later, the final and most severe stage of syphilis, with its disconcerting psychological symptoms, could be prevented. Although it is questionable to call the bacterium “the essence” of these problems, as the course of the disease differs between people and not every patient suffers the neurological damage associated with the psychological symptoms, the parallel with essentialism is obvious. For now, there were at least some clinical cases where psychiatric problems could be linked to an independent causal agent in the sense of realism and the general view of medical diseases, and this knowledge could even be utilized for therapy.

Thomas Insel reiterated this view when he informed the public at large that “faulty circuits” or “malfunctioning connections” underlie psychiatric disorders and that this knowledge is “forcing psychiatrists to rethink the causes of mental illness” (Insel, 2010, p. 44). He described area 25 in the brain as part of the “depression circuit”. He also provided similar descriptions of the “faulty circuits” underlying attention-deficit hyperactivity disorder (ADHD), obsessive compulsive disorder (OCD), and post-traumatic stress disorder (PTSD). Insel compared treating depression by means of electrical stimulation of area 25 with “rebooting” a frozen computer. Those unfamiliar with neuroscience should know that the categorization of “area 25” itself stems from an outdated brain map—another classification system—which is more than 100 years old and does not meet present scientific standards (Zilles & Amunts, 2010). This and the knowledge that, as in the case of syphilis, psychological symptoms can be linked to

<sup>2</sup>See, for example, the “Guide to Snowflakes” developed by Kenneth G. Libbrecht, Professor of Physics at the California Institute of Technology, at <https://www.its.caltech.edu/~atomic/snowcrystals/class/class-old.htm>

these neural processes in some but not all cases, illustrate the hypothetical nature of this neurobiological model.

Another important fact is that none of the breakthroughs that Insel predicted for 2020, such as using brain scanners to diagnose mental disorders, were actually achieved. Meanwhile, other psychiatrists criticized the fact that their discipline's strong focus on the brain and nervous system hindered the further development or application of evidence-based therapeutic and preventive approaches (Lewis-Fernandez et al., 2016). They felt that the one-sidedness of the research agenda was harming patients. Yet Insel's position is just a simplified example of the influential view that mental disorders are brain disorders, closely associated with both essentialism and realism. But in the mid-nineteenth century, long before our time and even before Kraepelin, this view had been developed by another German psychiatrist, Wilhelm Griesinger (1817–1868), who is still sometimes referred to as the “father of neuropsychiatry”. In 1845, he wrote in his then influential textbook on psychiatry:

The first step towards a knowledge of the symptoms is their locality—to which organ do the indications of the disease belong? what organ must necessarily and invariably be diseased where there is madness? The answer to these questions is preliminary to all advancement in the study of mental disease. Physiological and pathological facts show us that this organ can only be the brain; we therefore primarily, and in every case of mental disease, recognise a morbid action of that organ. (Griesinger, 1845/1867, p. 1)

In line with this thinking, American psychiatrists (and not only they) set out in around 2000 to finally build a classification system guided by biology, combining data on genetic abnormalities, on “faulty circuits”, and from neuroimaging—in short, “biomarkers” (Hyman, 2007; Kupfer et al., 2002). To put it differently, the *DSM-5*, eventually published in 2013, was intended as the first *DSM* to feature a true *pathophysiology* (literally: a physiology-based system of diseases). But if we now study the common and influential diagnostic manual of the APA, not a single reliable biomarker is reported in spite of the hundreds of mental disorders distinguished in it (Frisch, 2016; Schleim, 2022a). It is important to emphasize once again that this does not make people's psychological problems any less real. It shows instead—and we now have almost 200 years of evidence to support this—that the biological level associated with essentialism and realism does not provide an accurate account of mental disorders.



This does not require us, as is sometimes responded at that point of the argumentation, to assume the existence of an immaterial soul either. Instead, the present outcome is understandable when we realize the sheer diversity of people and their mental life and that even much simpler thoughts and emotions cannot be linked to unique neural signatures, also within psychology at large (see also Anderson et al., 2013; Schleim, 2022a). There is thus a good reason to have independent disciplines such as psychology and psychiatry alongside biology and neurology. The objects of investigation in the former fields are actually culturally formed and situationally embedded *subjects*—not atoms, molecules, or brain circuits (Hyman, 2021; Schleim, 2022b; Varela et al., 2017). This paves the way for an alternative view such as social constructionism.

### *Social Constructionism*

Roughly halfway through the twentieth century, sociologists developed sophisticated views on how some knowledge is socially constructed, that is, brought into the world by us humans and our social institutions (Berger & Luckmann, 1966). Such discussions often go wrong when people misunderstand “socially constructed” to mean “less real”. This may be due to an incomplete understanding of philosophical realism, which we briefly addressed in the previous section: the view that there is an observer-independent world, such as the chemical elements distinguished by their atomic number. Social constructionism obviously differs from realism in that it describes facts brought into being by human activities. The aversion of some to such social constructs may be understandable if we reflect on the common view that only natural sciences are “hard sciences” and that psychology, psychiatry, and the social sciences must therefore somehow be of a lower status unless backed up by “hard science”.

The fact that evolutionary, biological, or neuropsychology as well as biological or neuropsychiatry have so many supporters is probably because these scientists are worried that their knowledge will not be taken seriously enough if it cannot be described in biological or neuroscientific terms (see, for an example, Kendler, 2016). It goes beyond the scope of this book but deserves at least mention here that the implications of quantum physics and its mathematical formalization for realism continue to be debated even a century after its breakthroughs. To put it differently, the “hardness” of the most basic physics known so far is not all that clear and some

interpretations emphasize how the results of experimentation are produced by the human observers themselves (Faye, 2019; Gribbin, 1995).

The upshot of the previous section was that essentialism has failed for mental disorders at the classification level, particularly because there were remarkably few examples to support this view for almost 200 years. This is especially odd compared to the dominance that biological psychiatry has gained within research and treatment. Similarly, therapies based on the brain-based view of mental disorders have repeatedly provoked strong criticism, including within science itself. Telling examples are brain stimulation and neurosurgery in the 1950s to 1970s (Schleim, 2021; Valenstein, 1974) and—more recently and not for the first time—psychopharmacology (Hengartner, 2022; Margraf & Schneider, 2016; Moncrieff et al., 2022). These are complex issues that we cannot address here in detail, but fortunately we do not have to. For our purpose, it suffices to understand that the present situation calls for a different answer to the question of *what kind of things mental disorders are*. This will also pave the way for another perspective on mental enhancement and substance use in the later chapters.

Social constructionism emphasizes the importance of certain human actors and powerful institutions in drawing a line between what is considered normal and abnormal in the psychological domain. The psychiatrist in Machado de Assis's novella described at the beginning of this chapter is not only an individual in a power position but also a representative of medicine and science, both powerful social institutions. The fact that the doctor first put 80% of the local population into the mental asylum on the assumption that insanity is a disequilibrium of the psychological faculties and then, after finding out that this was at odds with the statistics, hospitalized only the other 20% under the opposite definition, is a fictitious and oversimplified yet telling example. Unfortunately, the implications of drawing this line are not always as funny as it may seem here, as we will shortly find out. *The Alienist* vividly illustrates the severe consequences that a mere definition by an authority, and as such a social construct, can have on the world and the people in it.

### *Excursion: What Is Money?*

Before returning to our modern world of mental health, let us discuss a final example for those still committing the “less real” fallacy about social constructs. Open your wallet and take a look at a banknote or,

alternatively, check your bank account. *What kind of thing is money?* I have European euros, US dollars, Swiss francs, and Indian rupees at my disposal. What all the notes have in common is the name of an institution or its representative (namely, Mario Draghi, former president of the European Central Bank, the US Federal Reserve, the Swiss National Bank, and the Reserve Bank of India). These institutions have been granted the privilege—established by law, another social institution—of issuing money in a certain currency. Anyone printing such notes without authorization will be prosecuted for forgery and severely punished. Until the Bretton Woods System ended in 1971, money had to be backed up by a certain amount of gold (about 0.89 gram per US dollar). As one of the basic elements (atomic number 79), this may be understood as an essence. The paper notes then simply were more convenient to use in daily life than heavy gold coins and bars.

That system was replaced by the present fiat currency model allowing central banks to create money at will. But private banks can also do this to a certain extent. Imagine having 1000 of your local currency in your bank account. This actually means that you are lending this amount to the bank until you withdraw or transfer it. Depending on the precise legal regulations, the bank can in turn lend, say, up to 9000 to other clients simply by putting that number on their account, expecting it to be returned at a later time and including interest. This whole system is based on the trust—a psychological process—that people can trade money for their desired goods and services and that loans will be settled.

Importantly, although money is a social construct that is literally created by central or private banks, thus human agents and institutions, much of our life deals with this “thing”. For example, people work many hours to acquire it, some even risking their health or lives (think of police officers, sex workers, soldiers, or mercenaries). Fiat money in particular is not a physical thing. Even if you had a machine creating perfect copies of the paper notes atom by atom, you would still be prosecuted for forgery and the counterfeit notes would be destroyed. This foray into the nature of money illustrates that we may have good reason to overturn the “less real” fallacy. For our everyday lives at least, psychological processes and social constructs apparently matter much more and are in this sense “more real” than the entities that some natural scientists deal with by virtue of their profession.

### *Social Constructionism: Historical Examples*

But what does this mean for mental disorders? Is their classification really as arbitrary as Machado de Assis's *The Alienist* suggested in the nineteenth century? Those arguing in favor of a constructionist view often refer to examples such as *drapetomania*, diagnoses of *schizophrenia* during the US civil rights movement, and *homosexuality*. The former two illustrate the abuse of psychiatry for racial discrimination purposes, the last for discrimination based on sexual preference. Let us discuss them here briefly.

To be fair to present-day psychiatry, the first example is not only very old and extreme but it also never became widely accepted in the medical domain. It is nevertheless an illustrative case of how wrong things can go when declaring certain psychological processes or behaviors to be pathological. On March 12, 1851, the American physician Samuel A. Cartwright (1793–1863) gave a speech on the “Disease and Physical Peculiarities of the Negro Race” at the annual meeting of the Medical Association of Louisiana, later also published in its journal (Cartwright, 1851). The doctor talked about “drapetomania, or the disease causing negroes to run away”. The word is derived from the Greek term for a runaway slave (*drapetes*) and an old term for madness (*mania*).

Cartwright described the “disease” as “unknown to our medical authorities”, but “its diagnostic symptom, the absconding from service” (ibid, p. 711), as well-known to overseers. In contrast to common accounts on the internet, this racist physician did not suggest whipping the slaves as a standard “treatment” for drapetomania. Instead, Cartwright described how it could successfully be prevented: by treating the slaves as neither too equal, nor too unequal. The captives should be held with some degree of comfort, but not too much, and with not too much brutality either. The doctor compared the “proper” relationship between master and slave to that between parent and child. Causes of the slaves’ discontent should, where possible, be removed. Only when that did not work should punishment be used to force them into submission.

The (for us) incredible idea of framing a human being’s desire for freedom as a disease or madness can be better understood when we realize that many whites at that time and place firmly believed that enslavement was the natural condition for blacks (see also Follett, 2005; Willoughby, 2018). Only a few years after Cartwright’s lecture, many would fight (and actually lose or even die) in the American Civil War to uphold this order.

Within that racist framework, the doctor was convinced that he was performing a public service for the betterment of humankind. In a similar fashion, until the 1970s—thus 120 years after the proposal of drapetomania—psychologists and psychiatrists would perceive it as a public service to “instigate” heterosexual sexual behavior in people, particularly men, who had a sexual desire for people of their own gender. For example, David H. Barlow, who later held professorships in psychology at US universities and became president of the Division of Clinical Psychology of the American Psychological Association in 1993, concluded the following in a review article titled “Increasing heterosexual responsiveness in the treatment of sexual deviation” and published in the scientific journal *Behavior Therapy* in 1973:

In view of the long-standing agreement among therapists on the importance of instigating heterosexual behavior, it is surprising how little research has been done. [...] Pairing procedures or fading techniques [...] are designed to instigate heterosexual arousal while social retraining aims to teach adequate heterosocial skills. (Barlow, 1973, pp. 666–667)

More interesting than Barlow’s individual case, which only recently sparked a discussion about whether this and similar publications should be retracted,<sup>3</sup> is the testimony of an apparent consensus among clinical experts at that time that certain kinds of sexual intercourse should be supported while others should be prevented—and that doing so actually was their professional responsibility. Psychologists or psychiatrists sometimes even transgressed the law in such research by using pornography or hiring sex workers, both illegal in some jurisdictions at that time, to find out whether their methods were “successful”; that is, whether they “instigated adequate heterosexual responses”. The methods described in Barlow’s quote were rather harmless compared with aversive conditioning, such as using electric shocks or substances that made people feel sick, or even brain surgery and stimulation in other studies (see Davison, 2021; Hinrichsen & Katahn, 1975; Moan & Heath, 1972).

<sup>3</sup>See, for example, “Beliefs Change”, published on June 14, 2022, in *Inside Higher Ed*, at: <https://www.insidehighered.com/news/2022/06/14/conversion-therapy-apology-statement-raises-questions>

Like Samuel Cartwright in the nineteenth century, these physicians and scientists in the twentieth century were shaped by their society and culture (just as we are by ours right now). A precondition for treating sexual preference—or the desire to be free—medically was to understand and classify it as a medical problem. The term “homosexuality” was introduced into the medical world by the German-Austrian psychiatrist Richard von Krafft-Ebing (1840–1902) in his textbook *Psychopathia Sexualis* toward the end of the nineteenth century. The *DSM-I* of 1952 listed it in the “sexual deviation” category, a subcategory of “sociopathic personality disturbances”. While there is no clear definition of “sociopathy”, it suggests a pathology that deviates from or even harms society. The *DSM-II* of 1968 still considered homosexuality as a mental disorder, although no longer of the “sociopathic” kind (see Drescher, 2015; Zachar & Kendler, 2012).

At different times and places, same-sex sexual intercourse has been defined as a sin or a crime. Sometimes it was simply considered normal, and there was not even a particular term for it. Greek and Roman antiquity is frequently given as an example for that. According to the written records, the situation was more complex, however. In the Roman Empire, sexual intercourse between two adult male citizens was legally prohibited. Penetrating such a person’s body was simply “not done”. The same goes for corporal punishment, with few exceptions in the military—and then only by an officer, the centurion, with a special vine stick. What we nowadays would call homosexual intercourse still occurred because not all men, based on their age or social status, were citizens in the described sense (Walters, 1998). This also serves as another telling example of how norms shape our thoughts and behavior.

Just as informative as the pathologization of homosexuality is its subsequent depathologization. A precondition for this was not only the growing social pressure against psychiatry by activists, but also a new definition of mental disorders requiring them to be “associated with either subjective distress or generalized impaired social effectiveness” (Friedman et al., 1976, p. 58). One of these authors, Robert L. Spitzer (1932–2015), also chaired the development of the *DSM-III* published in 1980. This was the first edition from which homosexuality was removed, after board members of the American Psychiatric Association (APA) had voted in 1973 and 1974 that it should no longer be diagnosed (see also Drescher, 2015;

Zachar & Kendler, 2012).<sup>4</sup> We discussed the present definition of mental disorders in the *DSM-5-TR* above, where we can see that this understanding that was introduced in the 1970s, not without resistance among psychiatrists, is still the official account.

A final example in this—already lengthy—section on social constructionism is schizophrenia, but we will elaborate further on the thoughts developed thus far at the end of this chapter. Spitzer, whom we have just referred to for his contribution to depathologizing homosexuality, developed a computer program in 1968, quite exceptional at that time, to check the consistency with which schizophrenia was diagnosed in different places (Spitzer & Endicott, 1968). His results and subsequent research indicated that the disorder was understood more broadly and thus diagnosed more frequently in the US than in the UK (Cooper et al., 1972). The opposite pattern was found for affective disorders (such as depression), which seemed to be more frequently diagnosed in the UK than the US. Another study used videos of American and English patients, which had to be assessed by clinical experts in the two countries to control for possible differences in the prevalence of disorders between places (Kendell et al., 1971). The results confirmed the existence of distinct understandings of the disorders in clinical practice. To be fair, we should remember that this was before the *DSM-III* was developed, when a growing number of psychiatrists themselves had become dissatisfied with their classification system.

Nevertheless, the example illustrates, at least to a certain extent, that clinical diagnoses are in the eye of the beholder. Although the situation has improved since then, the inter-rater reliability for the present *DSM-5* diagnoses is still not perfect (Freedman et al., 2013). Experts still can and do disagree on the correct category in individual cases. For a severe diagnosis like schizophrenia, generally characterized by a combination of “negative symptoms” (such as cognitive decline) and “positive symptoms” (positive in the sense of “added”, such as hearing voices or paranoia), the consequences are anything but trivial. Because the diagnostic act in itself

<sup>4</sup>That is not the whole story. The *DSM-III* contained the category “ego-dystonic sexual orientation/homosexuality”. While this did not label the same-sex sexual preference in itself a disorder, it still pathologized the suffering from a sexual orientation at odds with one’s self-image. This was later removed in the revised *DSM-III-R* of 1987. In theory, a classification such as “sexual disorder not otherwise specified” since the *DSM-IV* of 1994 provides a category for diagnosing a wide range of sex-related problems when the clinical professional deems it useful.

can have a devastating impact on patients, some clinicians would like to replace the category with something less stigmatizing and to instead indicate a spectrum of psychosis risk, which all people have to some extent (see, for example, Tebartz van Elst, 2021; Van Os, 2016; Van Os & Linscott, 2012).

Uncertainty about the diagnostic entity, from Kraepelin's *dementia praecox*, later replaced with "schizophrenia" by the Swiss psychiatrist Paul E. Bleuler (1857–1939), and perhaps soon to be replaced by something else, partially explains how the category could be abused by (mostly white male) psychiatrists in the US in order to counteract riots by (mostly black male) activists of the civil rights movement of the 1950s and 1960s. Based on archive studies, Jonathan M. Metzl, Professor of Sociology and Psychiatry at Vanderbilt University in Nashville, Tennessee, described "How Schizophrenia Became a Black Disease" in that period (Metzl, 2010). As late as 1974, an advertisement in the *Archives of General Psychiatry* (now: *JAMA Psychiatry*), the official psychiatric journal of the American Medical Association, entitled "Assaultive and belligerent?" showed an angry-looking black man and proposed Haldol, a fast-acting tranquilizer, as a psychopharmacological solution: "Cooperation often begins with HALDOL", the ad explains. Could *Frauengold*, which we discussed in the preface, have been inspired by such advertisements? In any case, the same tranquilizer was still mentioned almost 50 years later in a critical reflection on structural racism in psychiatry when dealing with homeless people, the Black Lives Matter movement, and the COVID-19 pandemic (Dykema, 2021).

This section is by no means intended to detract from the contribution of clinical psychologists, psychiatrists, or other healthcare personnel, who are often the last resort for people with severe mental problems, nor to suggest that they are all racists. But it should be clear by now that essentialism or something very similar does not work as a theoretical framework for mental health and that there are at least some strong cases for social constructionism. Importantly, this does not render the mental disorder concept entirely arbitrary, as fictively illustrated in Machado de Assis's *The Alienist*.

This chapter has so far emphasized that mental health is strongly associated with cultural and social norms. We can thus take the established psychiatric disorder categories—representing the consensus of influential American psychiatrists and not "hard" or "objective" natural categories—somewhat less seriously in the remainder of the book. This will eventually



also enable a broader view on substance use. But before addressing this, we shall first round off the philosophical account on “How to make sense of things” with the third and last view, pragmatism, as well as learn some basic facts about addiction and reflect on some recent diagnostic trends in the following sections.

### *Pragmatism*

Pragmatism is the ideal stance for those who do not like complicated philosophical discussions. Put simply, it holds that we should just do “what works”. In science at large, it suggests that researchers’ theories and entities are the tools they use to do their work rather than necessarily reflecting something in an observer-independent “world out there”, as demanded by realism (see also Chalmers, 2013). Because pragmatism comes with minimal philosophical commitments, it does not really oppose the previous views but rather shifts the perspective on the utility of a classification system or of research and clinical practice.

This in itself does not give us a clear answer as to *whom* the mental healthcare system should work for. That answer is not as obvious as one might think. Peter Zachar has advocated a pragmatic view to “help us meet scientific and professional goals, such as reliable diagnosis, prognostication, treatment selection or identification of genetic risk” (Kendler et al., 2011, p. 1146). This stance implies patients’ interests, as they seek help to find solutions for their psychological problems. But health insurance providers are also stakeholders in that system and might—and in many cases actually do—limit diagnostic procedures and treatment selection to control costs.

Clinicians and scientists, in turn, are often embedded in certain institutions with their own rules and interests, such as fulfilling career and budget aims. Corrado Barbui, a much-cited depression researcher collaborating with the WHO, noted that the category major depressive disorder (MDD) “fulfils more a formal requirement than a clinical need, in particular that of being accountable and that of being coherent” (Barbui, 2015, p. 465). Simply due to their present dominance, views akin to essentialism are very useful for scientists wishing to secure research funds and publish their findings in highly competitive contexts. But, according to critical voices even from within psychiatry, that comes at the cost of neglecting therapeutic innovation and thus also patients’ interests (Lewis-Fernandez et al., 2016).

This variety of possibilities illustrates that even from a pragmatic point of view some value judgments are necessary to decide whose interests should be guiding or how to define and measure utility. Obviously, the entire healthcare system would not make sense without the *patients*, the individuals that it is meant to help or heal. This can be taken as an argument for their interests being prioritized. But the innovative research on the new concept of health discussed in the introduction has also shown that different stakeholders—such as patients, clinicians, administrators, and politicians—differ in their views on what belongs to health and what does not (Huber et al., 2016). The necessity to choose and define emphasizes the fact that pragmatism, even if it comes with fewer commitments, is not an entirely neutral position either.

Providing an informed answer to all these questions goes beyond the scope of this book. But with what we have learned so far, we can now understand the *DSM* in a more meaningful way. The fact that it has avoided strong commitments about the causes of mental disorders since the *DSM-III*, that it emphasizes subjective suffering and functional impairment, and that it also seeks to improve consistency among clinical experts—what Barbu called “coherence” in the above quote—fits very well with pragmatism. The APA’s diagnostic manual thus adopts a very pragmatic view. This makes a lot of sense for clinical experts who often have to take immediate action and cannot postpone their decisions until a distant future when the philosophical debates about essentialism and social constructionism may have been settled. This interim conclusion will also be useful for the next section on addiction.

## 2.2 WHAT IS ADDICTION?

The common meaning or etymology of a term does not necessarily reflect its present clinical or scientific use, but clinicians and scientists also rely on their common language or derive terms from it. To a certain extent, their work is thus also a language praxis. As we discussed in detail in the previous sections, they use classification systems to structure what they are doing in order to provide and create consistency. Ultimately, they record their findings in written reports or publications. It can thus be useful to have background knowledge about a term’s general use and origins.

The *Oxford Dictionary of English* (online edition) defines “addiction” as “the fact or condition of being addicted to a particular substance or activity”. This of course shifts the question to the meaning of “addicted”.

The dictionary defines this as being “physically and mentally dependent on a particular substance”. “Dependence”, in turn, means “the state of relying on or being controlled by someone or something else”. We have thus gone from addiction to dependence to being externally controlled. The English term “addiction”, derived from Latin *addicere* (literally: to speak to), originally referred to an attachment that could have been perceived as positive or negative, depending on its object, such as religious belief or gambling (Rosenthal & Faris, 2019). By contrast, the German *Sucht* relates to pathology (*siech sein*, being sick) and the Dutch *verslaving* literally expresses the notion of enslavement. The latter can be linked back to *addicere*, also used as a legal term in Roman law as early as the fifth century BCE to attach slaves to their masters (ibid.).

So what about the more technical use of the word? An influential source from the time of alcohol prohibition in the US (1920–1933) gives the following answer in a section entitled “What Drug Addiction Is”:

What, then, is the thing we call drug addiction? It is one of the anomalies of medicine, of research, of science, of religion, of social work that this subject has received so little analytical study that even after hundreds of years of addiction [...] no one knows exactly how these habit-forming drugs accomplish their fell purpose in the human body. One thing we do know, and that is that drug addiction is a habit, that it breaks down character and cripples the soul. (Graham-Mulhall, 1926, p. 95)

This quote comes from *Opium, the Demon Flower*, a book quite literally illustrating the demonization of drug use that we will discuss in more detail in Chap. 4. The work was praised in a review in *The Journal of Education* of September 13, 1926 for “promoting so noble a cause”, and the reviewer concluded that it should be made available “in every school and professional library in America”. That recommendation seems to have been effective, as the book’s third edition was already printed in 1928. The author, Sara Graham-Mulhall, had formerly been first deputy commissioner at the Department of Narcotic Drug Control of New York State and was president of the Narcotic Drug Control League at the time that *The Demon Flower* was published. She also won the *Pictorial Review* award, a grant of \$5000 (corresponding to about \$90,000 today) offered by the popular women’s magazine to the American woman “who made the most valuable contribution to the advancement of human welfare” in

a particular year.<sup>5</sup> Graham-Mulhall promised to use the funds to support the anti-narcotic movement. In her book, she characterized the psychology of the drug addict as follows:

The addict loses power of concentration, power of application, power of will and the power of clear focus on ethical and moral values. He does not do this willfully. It is done for him by the drug, no matter what mental and moral fiber he may have had before taking the drug. The addict, deprived of his drug, exhibits the same psychology as a drowning rat or a drowning man. He grabs at a straw. He has then but one instinct, and that is self-preservation, which to him means drug. [...] There is no such thing in the category of addiction as a self-controlled addict. If you are taking drugs, it is automatically certain that you are prepared to lie or steal or use physical violence to get the drug you think you need. (ibid., pp. 98, 107)

The author conveniently split the world into good and evil. For her, drugs obviously belonged to the latter category. An unfortunate feature of Graham-Mulhall's writing is the amalgamation of factual statements with moral attitudes in a way that makes it difficult for the reader to distinguish between the two and to note the strong bias in her views. If we want to interpret this in a charitable way, we can imagine that in her official function she mostly became acquainted with severe cases of drug use, people whose consumption had been noticed by and then came under purview of the authorities. But some 100 years later, we know that even for hard drugs usually only a minority of users become addicted, and that this depends not only on the substance but also on social and personal factors. Let us discuss this important question in more detail.

### *How Likely Is Dependence?*

Lee Nelken Robins (1922–2009), Professor of Social Science in Psychiatry at Washington University in St Louis, studied the drug use of US soldiers during the Vietnam War (1955–1975) and after their return. This was a unique historical opportunity to see what happened when a large number of people (mostly young men) entered a harsh environment where high-quality drugs were available in large quantities and then returned to “normal” society. According to Robins' data, based on self-reports, military

<sup>5</sup>According to the *Margaret Sanger Papers Project*, online at <https://sangerpapers.wordpress.com/2011/07/08/the-company-she-kept-1924/>

documents and urine tests, the prevalence of opiate use (opium and/or heroin) increased from 11% pre-Vietnam to 43% in the war zone (Robins et al., 1974). The essential question, also from a public health perspective, was how many veterans would later continue to use drugs in their home country. If Graham-Mulhall's perspective were accurate, that figure would have to be close to 43%. However, the post-Vietnam prevalence of drug consumption fell to 10% and was thus roughly equal to the lifetime prevalence of opiate use in the general population (Hall & Weier, 2017; Robins et al., 1974). But more importantly, only 1% of veterans became re-addicted to heroin in the first year after their return.

The studies by Robins and her colleagues were met with disbelief because their data did not correspond to the common negative views about the substance and the results of domestic studies in the US. However, they and other researchers kept pointing out that opiate use was less stigmatized in Vietnam and that the drugs were easily available there, even of better quality and at a lower cost (Hall & Weier, 2017; Robins, 1993). This allowed most soldiers to smoke or sniff heroin rather than inject it. But because the purity was much lower and the price much higher in the US, domestic users had to inject it to achieve a similar effect. And this way of administering the substance is much more frequently associated with dependence than smoking or sniffing.

Furthermore, poorly educated men from urban areas and socially disadvantaged families with a history of drug use were more likely to both use heroin *and* become addicted in the US, whereas also other groups of men tried out the drug in Vietnam. After their return, most of the latter switched to cannabis and alcohol, more widely available and more socially accepted substances in their home country at that time (Hall & Weier, 2017). The fact that only a minority of users becomes addicted and that the likelihood depends on psychosocial factors—such as the character of an environment and social stress—is backed up by recent and experimental research (see Ahmed et al., 2020).

For example, the trials conducted by Bruce K. Alexander in the late 1970s that became widely known as *The Rat Park Experiments* illustrated how rodents, after being accustomed to opiates in cramped and environmentally deprived cages, would eschew the drugs even when sweetened with sugar after they had been moved to the much more diverse and stimulating “Rat Park” (see Gage & Sumnall, 2019). Though some criticized these trials as oversimplified, newer epidemiological data of humans suggest that 15% of the users of illegal substances become dependent (Anthony

et al., 1994), and recent laboratory experiments showed that 20% of genetically very similar rats became addicted to cocaine (Lüscher et al., 2020).<sup>6</sup>

The conclusion is always the same: Drug dependence seems to be a biopsychosocial phenomenon that cannot merely be reduced to the features of a substance or the genes of a consumer alone. This emphasizes how complex an issue addiction is. It is also highly moralized and politicized. In 1971, decades after the Prohibition in the US but a few years before the US army withdrew from Vietnam, President Richard Nixon would declare the “War on Drugs”. When his Republican successor President George H. W. Bush proclaimed the “Decade of the Brain” almost 20 years later, addiction would be identified as one of the top priorities for the neurosciences:

Research may also prove valuable in our war on drugs, as studies provide greater insight into how people become addicted to drugs and how drugs affect the brain. These studies may also help produce effective treatments for chemical dependency and help us to understand and prevent the harm done to the preborn children of pregnant women who abuse drugs and alcohol.<sup>7</sup>

### *The DSM on Addiction*

This was in 1990. But how does the present *DSM* characterize addiction? The *DSM-5-TR* contains a section on “Substance-Related and Addictive Disorders” (APA, 2022). It distinguishes “use disorders”, acute intoxication, and withdrawal for several substances (e.g. alcohol, caffeine, or cannabis) or substance classes (e.g. hallucinogens, opioids, or stimulants). The “use disorders” generally contain a list of symptoms referring to loss of control (e.g. consuming more than wanted or in spite of negative individual or social effects) or psychological processes such as tolerance and

<sup>6</sup> Measuring this precisely presumes a clear understanding of what addiction is, but this section shows that there is not an unambiguous answer. However, the online Addiction Center based in Orlando Florida, which can hardly be accused of downplaying drug harms, states that “about 10%” of people misusing prescription opioids and “roughly 10%” of all cannabis users become addicted; no such figures are provided for alcohol, cocaine, hallucinogens, heroin, methamphetamine, and nicotine; see: <https://www.addictioncenter.com/addiction/addiction-statistics/>

<sup>7</sup> Presidential Proclamation 6158 of July 17, 1990, online at <https://www.loc.gov/loc/brain/proclaim.html>

craving. The section's introduction explains that "the phrase 'drug addiction' is not applied as a diagnostic term in this classification, although it is in common usage in many countries to describe severe problems related to compulsive and habitual use of substances."

Besides these substance-related categories, the section contains one notable deviation: *gambling disorder*. This single exception probably explains the "...and Addictive Disorders" of the title. According to the manual, this reflects "evidence that gambling behaviors activate reward systems similar to those activated by drugs of abuse and that produce some behavioral symptoms that appear comparable to those produced by the substance use disorders". We shall get back to the point about the reward systems shortly. Apart from what we have discussed so far, the roughly 80,000 words of the *DSM's* section on substance use and addictive disorders (for comparison: the whole present book has fewer than 50,000 words) contain the term "addiction" only *five* times in the body of the text. And these very few places often create the impression that the editors forgot to replace the term with the more common expression "substance use disorder". In conclusion, the *DSM* seems to eschew "addiction" as much as possible, perhaps because there is no generally accepted definition.

### *Two Pragmatic Views*

As we have learned above, such situations call for pragmatic solutions. I summarize two approaches to assessing alcohol dependence in Box 2.1, the one developed by the German Cancer Research Center (Schaller et al., 2017) and the Alcohol Use Disorders Identification Test (AUDIT) of the World Health Organization (WHO).<sup>8</sup> These approaches provide us with a clearer notion of what dependence is and why it can become a problem. Many of these aspects can be generalized to other substances as well.

We may thus conclude pragmatically that addiction or dependence is a complex condition combining (1) someone's psycho-behavioral loss of control, (2) impaired daily functioning such as the failure to pursue other interests, (3) psychological processes like craving, desire, or compulsion, and (4) psycho-physiological processes such as developing tolerance or withdrawal effects. It should be stressed that dependence often arises through a psychological learning or coping mechanism: People may use a

<sup>8</sup> Online at <https://www.who.int/publications/i/item/WHO-MSD-MSB-01.6a>

**Box 2.1 Assessing Dependence**

The German Cancer Research Center uses the following six criteria to assess alcohol dependence:

1. Do you have a strong desire or compulsion to consume the substance?
2. Tolerance: Do you need larger quantities of the substance to achieve an effect?
3. Do you continue to consume in spite of health damage due to the substance use?
4. Do you have difficulty controlling the beginning, the end, or the quantity of the consumption?
5. Do you have withdrawal effects when consuming less or nothing of the substance? (Such as trembling, unrest, sweating, sleeping problems, circulatory problems, cramps, or confusion.)
6. Do you increasingly neglect other interests due to the substance use?

According to these researchers, an alcohol dependence syndrome is present when at least three of the six criteria have persisted simultaneously during the previous 12 months. Note that I have deliberately replaced “alcohol” with the more general “substance use”, as this model can be meaningfully applied to other drugs as well. The WHO’s AUDIT uses ten items instead to calculate a score from 0 to 40 points. The higher the score, the more likely that an alcohol use disorder is present. To assess someone’s precise score, the original version should be used. I summarize the items here to illustrate the idea behind drug dependence or addiction, again replacing “alcohol” with “substance”. As with the previous list, the questions usually refer to the previous 12 months:

1. How often and what quantities of the substance do you typically consume?
2. How often were you unable to stop using the substance once you had started?

*(continued)*



**Box 2.1 (continued)**

3. How often have you failed to do what was expected of you because of the substance use?
4. How often did you need to take the substance in the morning to get yourself going after a session of heavy use?
5. How often did you have a feeling of guilt or remorse after using the substance?
6. How often have you been unable to remember what happened the night before because of substance use?
7. Have you or has someone else been injured as a result of your substance use?
8. Has someone been concerned about your substance use or suggested that you cut down?

One notable difference is the WHO's stronger reliance on subjective factors. For example, if people do not experience blackouts, feel no remorse, and can hide their use successfully from others, then that already eliminates 12 of the 40 points, or 30% of the maximum score. People with responses suggesting a dependency according to any of the lists should consider talking to a medical, a psychological, or a social professional about their substance use.

substance to suppress unwanted thoughts or feelings (e.g., the research on soldiers in Vietnam summarized above named dealing with boredom, homesickness, and disturbed sleep) or to achieve a desired experience (e.g., feeling high, euphoric, or connected with others).

Increasing positive or decreasing negative feelings both act as a reward, a reinforcer raising the likelihood of substance use in the future. This is particularly likely when a drug directly activates the brain's reward systems, as the *DSM* explained with respect to gambling disorder. After a sufficient number of repetitions, users may have learned that they need the particular substance (or activity) to achieve the desired state and in this sense have become dependent. In the next section, comparing gambling with some other conditions will allow us to understand some recent diagnostic trends in the domain of mental health.

### 2.3 RECENT DIAGNOSTIC TRENDS

We have seen above that the APA added gambling disorder to the DSM as the only nonsubstance-related addictive disorder, sometimes also called a “behavioral addiction”, on the grounds that it activates the brain’s reward systems. This seems to lend the category some neurobiological credibility. Two interesting psychosocial symptoms of that disorder’s nine criteria are, firstly, gambling when feeling distressed and, secondly, relying on the help of others, particularly their money, “to relieve desperate financial situations caused by gambling” (APA, 2022).

It is known for decades that there are social causes for the former, distress, such as poverty or being a single parent (Mirowsky & Ross, 2012). The latter, relying on help, is remarkable in that very rich people thus have lower odds of being diagnosed with gambling disorder, simply because they have enough money. We can again understand these aspects from a pragmatic perspective in combination with social constructionism: People whose loss of control over their gambling gets them into financial trouble will be more likely to seek help; and the *DSM*’s criteria reflect the consensus of psychiatrists who then see such people more frequently in their clinical work.

A “behavioral addiction” that has not made it into the DSM so far is *internet gaming disorder*. It was only added to the appendix under “Conditions for Further Study” because “research on these and other behavioral syndromes is less clear” (APA, 2022). The authors specify that “[t]his disorder is distinct from Internet gambling, which is included under gambling disorder”. This distinction will be challenging for psychiatrists in the future, since so-called loot boxes in computer games, with which the gaming industry earns billions, strongly resemble gambling and are therefore starting to be regulated as such in some countries.<sup>9</sup> These in-game mechanisms offer random special features against payment, as in a lottery.

Yet, the WHO experts drew a different conclusion and have already added *gaming disorder* to the new ICD-11. The International Classification of Diseases (ICD) is the WHO’s statistical and diagnostic manual, and countries not using the DSM commonly employ the ICD’s section for

<sup>9</sup>Since 2018, Belgium and the Netherlands have considered games involving loot boxes as gambling, such that the providers would require a special license. Apparently, these rules are enforced with mixed success, see: <https://arstechnica.com/gaming/2022/05/loot-box-laws-block-diablo-immortal-launch-in-some-european-countries/>

mental disorders instead. As with gambling, the findings that gaming activates the brain's reward systems played a significant role in the WHO's decision. The category has already been intensively investigated by scientists, some of whom are even looking for medical treatments (see, for example, Bae et al., 2018; Starcevic & Khazaal, 2020; Stavropoulos et al., 2019).

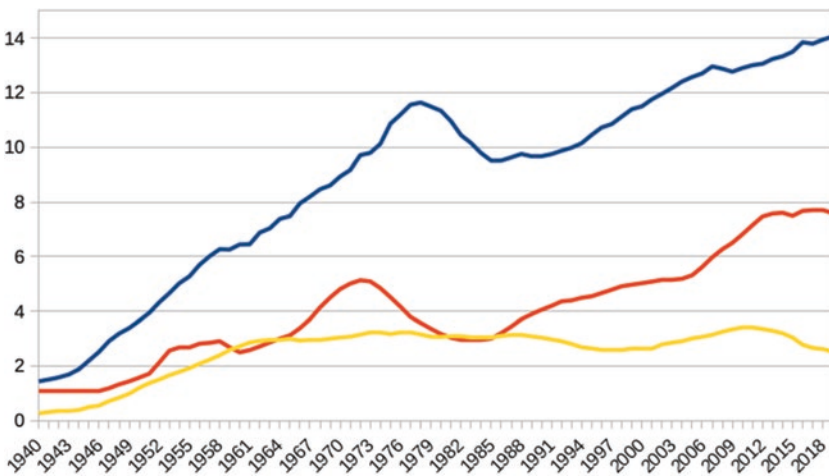
We thus see once more that leading psychiatrists can and indeed do disagree about what should be considered a valid diagnostic category. In countries relying on the ICD for the domain of mental health, gaming disorder is now becoming an official medical classification. This has real implications for people's lives, in this case particularly young men, who are the most active gamers. In line with what we have discussed earlier in this chapter, a loss of control reflected in diminished interest in other activities and facing social difficulties is a central aspect of the new disorder. But we should hesitate to medicalize our moral beliefs. For example, Joost A. M. Meerloo (1903–1976), a Dutch physician and psychoanalyst who fled to England during the Second World War and emigrated to the US in 1950, wrote about *television addiction* (Meerloo, 1954). He was particularly concerned about the use of this new medium among children and teenagers and concluded “[t]hat television fascination is a real addiction, that is to say, television can become a habit-forming device, the influence of which cannot be stopped without active therapeutic interference” (ibid., p. 291).

Such examples draw our attention to other possible “behavioral addictions”, such as exercise, Instagram, or sex addiction. Some clinicians and researchers are arguing in favor of the introduction of these and many more similar categories. Even the existence of an “Argentinian tango addiction” has been investigated (see Rosenthal & Faris, 2019). We can imagine that people must experience activities that they engage in for many hours without external pressure as rewarding, and that some individuals are excessively active such that negative consequences ensue. Using a broad definition of “addiction”, including controversial categories such as “food addiction” or “work addiction”, Sussman and colleagues concluded that 47% of adults might be addicted to something within a 12-month period (Sussman et al., 2011). We see once more how much depends on how disorders are defined and how researchers subsequently measure them.

### *Is the Prevalence of Mental Disorders Increasing?*

This raises the broader question of whether mental disorders are generally becoming more prevalent. It should be clear by now that the answer is not trivial as—unlike beans in a jar—there is no observer-independent way of counting these entities. The high number of news reports on mental health initially suggests an affirmative answer. A less arbitrary measure is the relative frequency with which the topic is covered in books (Fig. 2.1). However, this could simply mean that it is attracting more attention while the prevalence of the actual disorders remains more or less the same.

So what answer do researchers give, in particular epidemiologists who are specialized in investigating the prevalence of disorders and diseases in the population? Allow me first a historical remark: Our present question was already hotly debated in the 1960s. Figure 2.1 indeed shows a growing interest in mental health at that time. One particularly controversial



**Fig. 2.1** More Attention Paid to Mental Health. Mental health has increasingly been addressed in books published in English since the Second World War (*blue line*), with a first peak in the late 1970s. Writing about addiction has also become more common (*red line*), with a first peak in the early 1970s. By contrast, steroids (*yellow line*), which are used to change one's body (see Chap. 4), have not become more common a topic in English-language books since the 1960s (*yellow line*). Source: Google Ngram (lines smoothed;  $\times 10^6$ )

issue was whether people living in urban environments had more psychological problems than those from rural places. Thus, when the results of 1911 representative interviews for the Midtown Manhattan Study were published in 1962, suggesting that 81.5% of citizens had mental health issues, many understood this as supporting the hypothesis that cities are an unhealthy environment for humans (Srole et al., 1962).

However, we can see upon closer inspection that this very high percentage included people with very mild issues who probably did not need the support of an expert. Remember the “clinical significance”, “subjective suffering”, and “functional impairment” conditions discussed above. It is important to know that the symptom severity of the interviewees in Manhattan was rated on a scale from 0 to 6. If we take a more realistic cut-off value (e.g., a severity of 3 and higher), then 23.4% of the citizens would count as having a mental disorder, based on the same data. This would also be more consistent with the recent surveys we will discuss shortly and shows that such values cannot be interpreted meaningfully without background information on how they are calculated.

A much-cited analysis of the mental health of the inhabitants of 30 European countries reported figures halfway between the percentages that we have just discussed (Wittchen et al., 2011). Again based on representative interviews, these researchers estimated a 12-month prevalence of at least one mental disorder of 38.2%. This means that more than a third of the population would meet the criteria within any given year! It is important to know that this was based on a selection of only 27 common disorders, while the *DSM* distinguishes several hundred. But carrying out representative interviews about so many categories simply is not manageable using this epidemiological approach. Thus, we can only speculate that the overall prevalence would probably be above 40%, perhaps even higher than 50%, if all *DSM* disorders were included.

We have also just discussed a study that estimated the 12-month prevalence of addiction in the US adult population at 47%, using an exceptionally broad understanding of the category (Sussman et al., 2011). Combining their approach with that of the epidemiologists summarized in the previous paragraph would yield an incredibly high prevalence of mental disorders. Remembering the lesson we learned from *The Alienist* at the beginning of the chapter, we may then well ask whether deviance from the norm is in fact the new norm if it is so common.

It is particularly noteworthy that when the principal investigators of the huge epidemiological study repeated their survey for Germany alone, they

reported a much lower 12-month prevalence of 27.7% (Jacobi et al., 2014). The researchers explained this difference by the fact that fewer disorders were included. But if the results are so very dependent on the scientists' methodological choices, they are not very informative about the "real" prevalence. Another caveat is that the interviewees in such studies are commonly asked to report from memory any symptoms within the past year. This not only has limited reliability but is also not very indicative of the clinical significance of the psychological problems as explained above.

If we understand such figures to literally represent people in need of psychological or psychiatric services, the mental health system would simply collapse. Accordingly, the study found that of the interviewees who fulfilled the criteria for one mental disorder, only 11% reported having sought help (Jacobi et al., 2014). Besides the unfortunate fact that some people with very severe problems do not seek or receive the help they need, this finding strongly suggests that most of the people identified in such epidemiological studies do not perceive themselves as being truly impaired and prefer to solve their problems on their own.

A similar epidemiological study investigating the issue globally reported a 12-month prevalence of at least one mental disorder of 17.6% and a lifetime prevalence of 29.2% (Steel et al., 2014). While these findings still suggest that almost one in five people require psychological or psychiatric help at least once every year, epidemiologists are often quick to deny that there is any increase. That people suffer more from psychological problems is frequently assumed in the context of a social-political critique. But how can epidemiologists deny this with certainty if their methods and results differ so much? Besides, reviews and analyses focusing on individual disorders, such as ADHD (Thomas et al., 2015) or anxiety disorders (Remes et al., 2016), *do* report increasing prevalences as well as variability between countries and different editions of diagnostic manuals. To add a final complexity, there are in fact epidemiological studies reporting an increase in mental disorders on the global level, though their figures cannot fully explain the increased amount of diagnoses we see for many diagnoses (Richter et al., 2019).

In any case, there is no simple answer to the question posed in this section. Unlike counting the beans in a jar, the situation for mental disorders is rather like counting without knowing precisely what a bean is, with people occasionally adding or removing beans, with a few beans turning into peas, and with a couple of lentils becoming beans. Imagine what that would mean for the chemical elements: Gold, for example, would turn out

to be mercury instead. Many instances of what researchers considered to be helium was later defined as hydrogen. Chlorine proved not to be elementary at all and was thus removed from the list while experts finally agreed on adding “hypertine” (something I’ve just made up).

### *New Disorders*

We discussed in a previous section how complex it is to define addiction. But the same goes for many other disorders: There has been a long discussion about the distinction between depression and grief after bereavement (see Frances, 2013; Zachar et al., 2017). This question has now been settled by the APA with the introduction of *prolonged grief disorder* into *the DSM-5-TR*, in the event that a clinical expert deems a client’s grief to be culturally inappropriate (APA, 2022). *Gender dysphoria* has replaced *gender identity disorder* since the *DSM-5*, as psychiatrists believed it to be less stigmatizing a category; it may eventually be removed from the manual altogether. Some clinicians and scientists are trying to have *orthodoxia nervosa* included, excessive discipline concerning food, or to have *sluggish cognitive tempo* (which others have since called *concentration deficit disorder*) recognized as a new subtype of ADHD. There were more historical examples in much more detail in the section on social constructionism.

The point should be sufficiently clear by now. Now that all these complex arguments and facts have been presented, it is time to conclude this chapter and make a constructive suggestion as to what mental disorders are. We will continue to discuss a related question later in the book, where we recognize that—while epidemiologists disagree on the issue—data from studies investigating actual medical practice unmistakably report a strong increase in the diagnosis of mental disorders, which then also often implies the prescription of psychopharmacological drugs.

## 2.4 INTERIM CONCLUSION: MENTAL DISORDERS ARE NOT THINGS

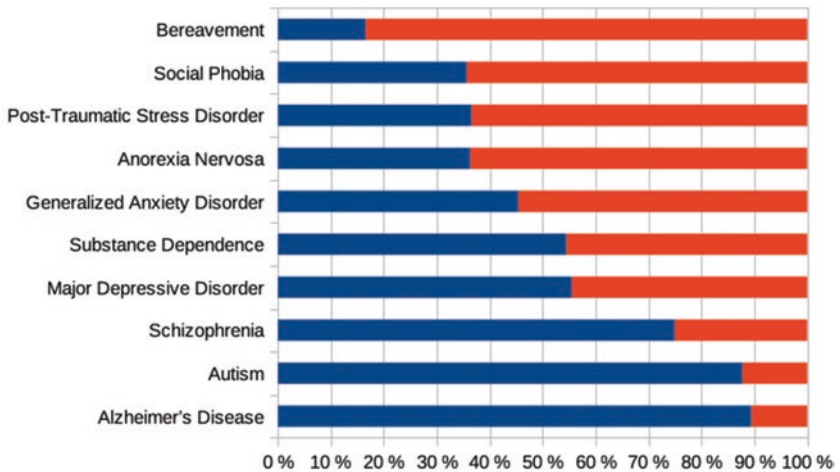
The best way to summarize all of the above would be: *Mental disorders are not things!* Ian Hacking described them as “moving targets” (Hacking, 1999). Clinicians and scientists, along with other social institutions, sometimes “make up” a certain way of being a person, and people thus classified and described often adapt in such a way that a “looping effect” occurs. Remember the analogy with the beans in a jar. Hacking convincingly described this for *multiple personality disorder* (MPD) in the 1980s:

When psychiatrists started diagnosing a few sensational cases in the 1970s, they also attracted considerable media coverage (see Harris, 2011; Nathan, 2011; Schreiber, 1973). Subsequently, more and more people manifested the symptoms. Not only did they become more bizarre, but the number of patients' "personalities" increased within a decade from 2 or 3 on average to 17 (Hacking, 1995). The disorder was also merchandized: Some patients literally sold their story, an MPD board game was produced, and "split bars" opened in some cities where people could meet such patients or where people with an MPD diagnosis could get to know each other. Over time, the diagnostic criteria changed again and again until the *DSM-IV* of 1994 eventually replaced MPD with *dissociative identity disorder*.

As I have repeatedly stressed in this chapter, this does not make mental disorders any less real. Even if a target is moving, it is still a target! But this dooms to failure any efforts to describe their "essence". The same goes for attempts to reduce them to biological states such as gene expression or brain states, on which billions are still spent every year. It just does not make sense to *reify* mental disorders, to describe them as things, if they are massively heterogeneous and dynamic processes, which are also culturally mediated. The outcome of almost 200 years of research supports this view, even for those disorders judged by clinicians to have mostly biological causes (Ahn et al., 2009; Fig. 2.2).

According to my own theoretical research, mental disorders *are* and *are not* brain disorders: They are in the sense that all our psychological processes are embodied, just as your current reading is enabled by a certain neural and body structure and the meaning of this sentence is somehow represented in your network of billions of neurons and other cells with their connections and activities; they are not because they are not things, and psychological language cannot be reduced to biological terms (Schleim, 2022a; see also Frisch, 2016; Fuchs, 2018; Moncrieff, 2020). The "neural correlates" or genes allegedly associated with the disorders reflect only some transient and limited statistical aspects of people's experiences or behaviors (Schleim & Roiser, 2009). And these findings actually often fail to be replicated: Based on data from tens of thousands of people, sometimes even more than a hundred thousand, we now know that genetic variability explains almost nothing in the domain of mental health (Giangrande et al., 2022) and also that neuroimaging is coming increasingly under fire (see Marek et al., 2022). When we do the maths and realize that, for example, the present *DSM* criteria for ADHD allow for

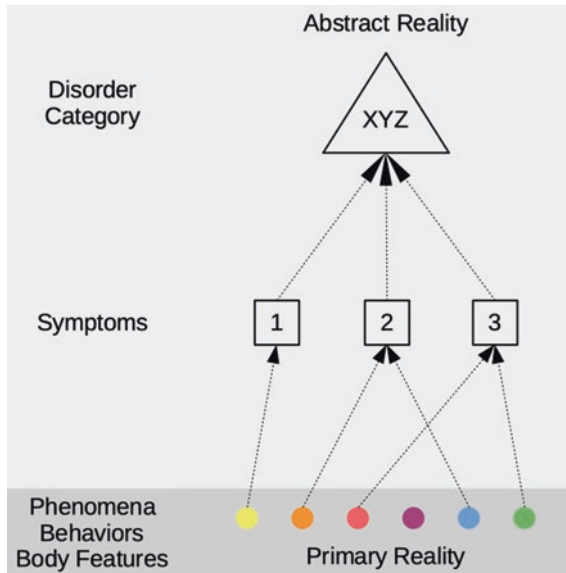




**Fig. 2.2** Clinicians' Beliefs About Causes. Ahn and colleagues (2009) asked clinical experts ( $n = 89$ ) to rate the causes of a subset of *DSM-IV* disorders as biological or psychological on a scale from 1 to 5. The following list shows a simplified selection of their results, illustrating how biological (*blue*) or psychological (*red*) the experts on average rated these disorders. These results strongly correlated with the view as to whether medication or psychotherapy would be the best treatment

116,220 different valid expressions of the disorder, we can better understand why the results must be as they are (Schleim, 2022a).

Many scientists are tricked by the application of statistical methods that provide only a transitory snapshot of something common to a selected group of patients while neglecting the individual heterogeneity and diversity of real life. But even without complex calculations and argumentation, it should be clear that, firstly, the very abstract and consensus-based disorder categories sanctioned by influential experts who, secondly, use a formalized technical language of symptoms are not the same as people's actual experiences, behaviors, and physiological processes (Fig. 2.3). Added to that is the historical and cultural variability (see Watters, 2010), which also shows that people learn to express their sensations, thoughts, problems, and situations in a certain kind of language. In our present time and situation, this has often become the language of clinical psychology and psychiatry, culturally disseminated by the media. In some non-Western cultures, though, it is much more common to describe one's distress in



**Fig. 2.3** Psychological Problems and Language. Someone’s experiences (“phenomena”), behaviors, and body features are part of what I call here “primary reality”. Although experiences can be psychosocially complex and culturally mediated, they exist more independently of an expert’s description. For example, in the case of a depressive episode, this could involve someone not falling asleep easily, engaging in excessive physical exercise, losing weight without dieting, and experiencing a bad mood or feelings of guilt. When clinicians and scientists speak of “symptoms”, they begin formalizing such processes and states of the primary reality in their technical language. An abstract, consensus-based disorder category such as major depressive disorder (MDD) eventually collects particular symptoms in a pragmatic way. The *DSM-5* criteria for MDD then allow 227 unique symptom combinations, which can, however, be based on an indefinite variability in primary reality

bodily terms (Antić, 2021; Desai & Chaturvedi, 2017; Nichter, 2010), and some psychiatrists are trying intensively to get body and environment back “inside” psychotherapy (see Fuchs, 2018; Van der Kolk, 2014).

This standpoint by no means denies the reality or severity of conditions like those that clinicians nowadays call “schizophrenia”, nor that psychopharmacology or other brain-based treatments can be helpful in dealing with the symptoms. There is no contradiction here because my own and

similar accounts do not deny the embodiment of our perception, cognition, emotion, and behavior (see also Schleim, 2020, 2022b). It further deserves mentioning here that people who hear voices, for example, can find nonmedical ways of dealing with their experiences (see McCarthy-Jones, 2012) and that patients with some severe diagnoses have better prognoses in countries that are less committed to biomedical treatments (Margraf & Schneider, 2016). A recent review furthermore found a total of 34 different models in the scientific literature that sought to make sense of people's psychological problems (Richter & Dixon, 2022). There are thus many good reasons to believe that the prevailing account is not the last word.

Much more can be said about mental disorders and the mental health system, as has in fact been done elsewhere (e.g., Frances, 2013; Scull, 2022). Nikolas Rose, for example, concluded in his comprehensive book on *Our Psychiatric Future* that while ever more people are experiencing psychological distress, many of them should be helped by community-based services rather than psychiatric labeling and medical treatment (Rose, 2019). Moreover, the proximal causes of this distress—such as violence, exclusion, and isolation—should be removed. This is probably all the more true during and after the coronavirus pandemic than previously.

We have now finished what is theoretically the most demanding chapter of the book. One of its primary aims has been to refute essentialism in order to enable a different view of mental health and enhancement, particularly “addiction” and substance use, which are further discussed in the following chapters. But we have actually learned much more about philosophical stances to make sense of things, about the distinction between “normal” and “abnormal” psychological processes, and about how the mental healthcare and science systems work. Essentialism would be the clearest guide for classification and treatment but it is unrealistic for mental disorders, even though they are embodied. Social constructionism emphasizes the cultural and institutional backgrounds to understand them and reminds us not to forget their psychosocial causes. And, last but not least, pragmatism emphasizes that classification systems should be useful in practical terms and that patients cannot wait until all scientific disagreement has been settled. It is helpful to keep these conclusions in mind for the remainder of the book.

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