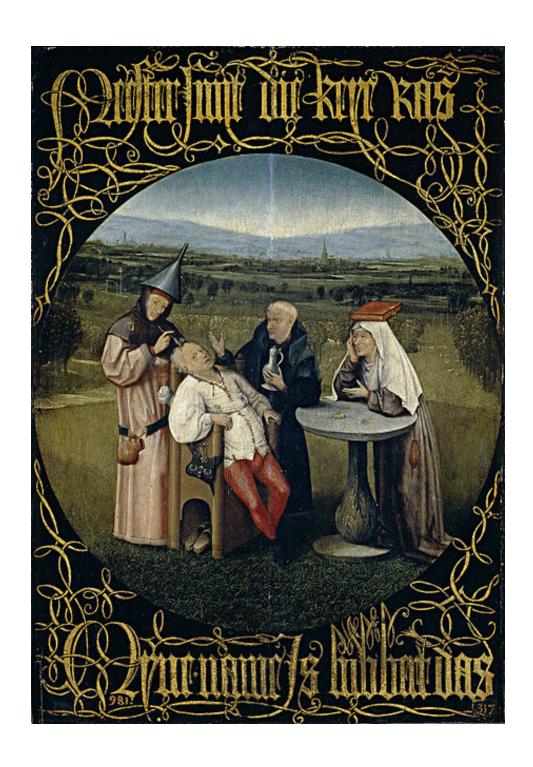
BIOLOGY'S BRANCHES:

Examining Historical Explanations for And Public Perceptions of Mental Illnesses And Other Psychological Disorders

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"Lunacy, like the rain, falls upon the evil and the good; and although it must forever remain a fearful misfortune, yet there may be no more sin or shame in it than there is in an ague, fit, or a fever."

James Frame (1860)

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1 Introduction & Background

Trepanning - the drilling of holes in the skull - has been practiced for at least 10,000 years. Between 5 - 10% of all skulls discovered from the Neolithic period have these trepanning holes (Faria, 2015). These skulls represent humanity's earliest attempts to cure mental disorders, and thus also signifies the beginnings of psychiatry as a field. Since this time, psychiatry has evolved through many different forms. These forms, in reality, are not so easily distinguishable, and vary based on geographic location. However, it can be useful to impose simplified and artificial divisions on these forms, in order to make some sense of them. A common scheme that accomplishes this highlights three general explanations that have been evoked throughout history to describe mental illness and other psychological disorders (MIPDs): somatogenic, supernatural, and psychogenic (Farreras, 2021). In this paper, I show how the Western world's conception of MIPDs has moved through these simplified modes of explanation through time. Pre-Hippocrates (~460BCE), and presumably into human pre-history as well, MIPDs were understood as supernatural phenomena ascribed to the wrath of local folk gods. Upon the arrival of Hippocrates and other less notable Greek physicians, humoral theory began to take hold, shifting the understanding of MIPDs from supernatural to somatogenic (ie. originating in the body). During the Middle Ages, the arguably more "scientific" somatogenic explanations were superseded by a new brand of Christian supernaturalism. Finally, in the modern era, alongside the Scientific Revolution, rationalist explanations for MIPDs emerge, returning for a time to a somatogenic understanding, but eventually resulting in the rise of the psychogenic explanation (ie. originating in the mind).

2 Ancient Greece

The "Dark Ages" of ancient Greece came to an end around the 6th century BCE with the rise of pre-Socratic philosophy. During this time, thinkers began to seek natural explanations to worldly phenomena, as opposed to religious or mythological ones (Magner, 2002). This rational approach to questioning encouraged the discovery of natural laws via observation and inductive reasoning. It is within this cultural milieu that we see the rise of Hippocrates (460 - 361 BCE),

a famous Greek physician (~150 years later). Even though philosophy was of minor importance to Hippocrates when it came to practicing medicine, he still thought it worthwhile to come up with his own system for understanding health and disease. This theory came to dominate the minds of medical practitioners for the next two thousand years, and it was called "The Humoral Theory." The idea behind The Humoral Theory is that humans are composed of four elements (earth, water, air & fire), which correspond to four bodily humors (black bile, phlegm, blood & yellow bile). According to Hippocrates, it is the imbalances of these humors that causes all disease, even mental illnesses. A text attributed to Hippocrates from the year 400 BCE called On the Sacred Disease is one of the earliest texts addressing a mental disorder from a logical, somatogenic perspective (Hippocrates, 400). In the text, Hippocrates attempts to explain the origins of epilepsy using his humoral theory, stating that it likely arises due to the lack of phlegm and bile in the brain. Concerning epilepsy, Hippocrates states:

It is thus with regard to the disease called Sacred: it appears to me to be nowise more divine nor more sacred than other diseases, but has a natural cause from the originates like other affections.

In the past, epilepsy had been primarily described as a spiritual disorder, due to its strange effects on people's behaviour and movement. For this reason, Hippocrates' attempt to explain this disorder (as well as many others) without deferring to supernaturalism represents a significant advancement in the way that people viewed the human body and disease. It is often said that Hippocratic medicine "emphasized the patient rather than the disease, observation rather than theory, respect for facts and experience rather than philosophical systems" (Magner, 2002). However, this attitude did not exist on its own; rather, it is generally representative of the Greek way of approaching and understanding nature. Looking back, it becomes obvious that this paradigm of reason and logic was indispensable for laying the groundwork of the modern scientific enterprise.

3 Medieval Europe

Over time, the humoral theory of medicine became mainstay in the Western world. While this theory was not called into question as much in the scientific arena, it had a new challenger in the public sphere: the Christian Church. This is because the Church began to ban all pagan books and scholars, as it was believed that these might cause people to abandon their faith (Magner, 2002). This move to outlaw all pagan sources had the effect of plunging western Europe into the "Dark Ages." Although some scholarship was still on-going, scientific thought, at this time, did not have the same amount of social leverage as it does nowadays. In other words, the Church's influence extended much more strongly over the minds of the public rather than those of scientists. While most scientists between the years 500 - 1500 would have still subscribed to the humoral theory, commoners sought help for MIPDs from clergymen and priests. This is because misfortune and disease were seen as punishments for sin. Thus, in order to cure themselves of maladies, patients would try things such as praying more, confessing their sins (penance), and purchasing additional indulgences. Often, the Bible was used as support for the view that God causes all illnesses. 1 Samuel 15 - 16 details the story of King Saul, who shirks his religious duties and commitment to God, and is subsequently punished for it by being tormented by an evil spirit. After Saul refuses to act according to God's wishes, the Bible states:

Now the Spirit of the Lord departed from Saul, and a harmful spirit from the Lord tormented him. And Saul's servants said to him, "Behold now, a harmful spirit from God is tormenting you." - 1 Samuel 16:14-15

However, in some cases, this supernatural view of mental illness extended further, even to the point of mocking the older (Greek) somatogenic understanding. A good example of this attitude can be found in the famous painting *Cutting the Stone* by Hieronymus Bosch (1450 - 1516; this is the painting on the title page above). Bosch's critique of the sometogenic explanation has previously been summmarized as the following:

It is possible that the flower hints that the doctor is a charlatan as does the funnel hat. The woman balancing a book on her head is thought [...] to depict folly. Michel

Foucault, in his History of Madness, says "Bosch's famous doctor is far more insane than the patient he is attempting to cure, and his false knowledge does nothing more than reveal the worst excesses of a madness immediately apparent to all but himself." - Wikipedia (2021b)

In *Cutting the Stone*, Bosch is mocking the old method of trepanning, which represents the undestanding of MIPDs as somatogenic. This implies that he held the view of his own day to be superior - namely, that MIPDs were of supernatural origin as consequences for sin (patients need spiritual help, not bodily cures). Recent scholarship has confirmed that these attitudes are generally representative of public opinion:

In recent decades, scholars have come to view Bosch's vision as less fantastic, and accepted that his art reflects the orthodox religious belief systems of his age. His depictions of sinful humanity and his conceptions of Heaven and Hell are now seen as consistent with those of late medieval didactic literature and sermons. - Wikipedia (2021c)

However, as I alluded to earlier, the scientific thinkers of this time did not necessarily agree with the knowledge being espoused by the church. This is especially true in the Islamic context, where no such invasive institutions existed. Appropriately termed the "Islamic Golden Age," many significant scientific discoveries were made during this time period. Of importance to our current investigation is an individual named Ishaq Ibn Imran (d. 908), an Iraqi physician (Omrani et al., 2012). His 10th century *Treatise on Meloncholy* represents an original contribution to the not-yet-fully-formed field of psychiatry. His understanding of melancholy as somatogenic rather than supernatural can be seen in his definition of melancholy:

Melancholy affects the soul through fear and sadness—the worst thing that can befall it. Sadness is defined by the loss of what one loves; fear is the expectation of misfortune.

Also within this treatise, Imran conceptualizes melancholy using Hippocrates' humoral theory, saying that it is caused by the accumulation of black bile (Omrani et al., 2012). The example of

Ishaq Ibn Imran shows that even during a period of relative scientific and cultural stagnation (at least in Europe), scientific thinkers committed to observation, reason and natural explanations were still hard at work. Fortunately, this "dark" stage in European history did not last forever - during the Scientific Revolution of the 16th and 17th centuries, empiricism and rationality retook their place in the public sphere, ending a 1,000 year era of religious domination by the Church.

4 Scientific Revolution

The Scientific Revolution marks a pivotal moment in European history, as it represents an unprecedented attempt towards empiricism and discovery of the natural world. It is only during this recent return to naturalism that we see the emergence of empirically-based somatogenic, and later psychogenic explanations for MIPDs, which form the foundation of our modern understanding. Aside from rationalism and empiricism, the earlier rise of humanism in the Renaissance was another important philosophical development, especially for psychiatry. Aside from its intellectual meaning, humanism is an idea that "emphasizes human welfare and the uniqueness of the individual" (Bridley and Daffin, 2018). One of the first individuals to realize the implications of the new humanist philosophy in the area of psychiatry was the German physician Johann Weyer (1515 - 1588). At the time that Weyer lived, the Church had already made a habit of burning a lot people at the stake who they deemed to be witches. Weyer's 1563 book De praestigiis daemonum (On the Tricks of Demons) attempted to defend people accused of witchcraft on the basis that most of them were mentally disturbed, not possessed by demons. The fact that Weyer took this position demonstrates that there was a growing intellectual and philosophical mistrust towards the doctrine of the Church. While still married very heavily to theological motivations, science was beginning to divorce itself from supernatural modes of explanation, and instead moving towards naturalistic ones.

Another prominent physician that helped to develop these natural modes of explanation for MIPDs was Emil Kraepelin (1856 - 1926). His most prominent contribution is his 1912 book *Lehrbuch der Psychiatrie*, in which he systematically distinguishes between various diagnoses

(this is called "nosology"). He also taught that the root of psychiatric disease was biological, and possibly genetic (Ebert and Bär, 2010). Although thinkers before him had already moved past the superstition characteristic of the Middle Ages, Kraepelin's *Lehrbuch der Psychiatrie* represents the first systematized effort at classifying and documenting all the various types of MIPDs, making him a true pioneer in this field:

The principle requisite in the knowledge of mental diseases is an accurate definition of the separate disease processes. In the solution of this problem one must have, on the one hand, knowledge of the physical changes in the cerebral cortex, and on the other of the mental symptoms associated with them. Until this is known we cannot hope to understand the relationship between mental symptoms of disease and the morbid physical processes underlying them, or indeed the causes of the entire disease process. - Kraepelin (1912)

This quote shows that Kraepelin had a nuanced understanding of the origin of MIPDs as both psychogenic and somatogenic, which has since influenced our modern understanding. Indeed, many scholars consider Kraepelin's textbook to be the foundation of our modern *Diagnostic and Statistical Manual of Mental Disorders* (DSM) (Decker, 2007). By mentioning Kraepelin, we have already found ourselves in the 20th century. Because of the quantity of well-documented scientific advancements since the 16 century, we must move back to this time period several times in the remainder of this paper in order to cover a variety of topics more fully.

5 Modern Antecedents

5.1 Mental Asylums - Pinel, Rush & Dix

It is impossible to mention the history of MIPDs in the Western world without also mentioning the Bethlehem Royal Hospital of London, also known as "Bedlam." While science may have been moving past the Church's denigration of mentally ill patients, the public perception of these people was still very much negative. The conditions of these early asylums were not the same as the clean, well-funded institutions that we have nowadays. Instead, patients (or more accurately, inmates) were chained to the wall in horrible conditions: they were malnourished,

without proper sanitation, and were basically tortured in attempt to "cure" them of their insanity. It is obvious to see that in these conditions, it was a rare occurrence for someone to ever recover in these institutions. Bedlam, founded in 1377, was the most famous of these asylums. Part of this fame can be attributed to its large public presence; anyone interested in viewing the inmates could pay one penny for admission to the asylum (Walsh, 1907). The famous 1735 painting A Scene at Bedlam by William Hogarth (1697 - 1764) depicts this exact activity. It would be a mistake to dismiss the viewing mentally ill people like animals at a zoo as a fringe pass-time. In the mid-1600s, an annual income of 400 pounds was average, meaning that 100,000 people visited the "hospital" each year (Walsh, 1907). Even during Johann Weyer's life, Bedlam was still functioning under these abhorrent conditions. However, Bedlam is not the only institution during this time period with blood on its hands. Other mental asylums existed all over Europe, including the Asylum de Bicêtre in France. The conditions of these hospitals did not start to take a turn for the better until 1792, when Philippe Pinel (1745 - 1826) was granted a leadership position at Bicêtre (Mackler and Bernstein, 1966).

Also known as the "Father of Modern Psychiatry," Pinel is a famous name in psychiatry because of the radical medical reforms that he introduced to the *Bicêtre* asylum, starting in 1792. Among the changes that Pinel introduced included allowing patients to work, the removal of restraints and shackles from the patients, as well as stopping the "treatments" that the patients were receiving, which included bloodletting, stomach purging, and blistering (Wikipedia, 2021e). This new approach to housing mentally ill patients has been termed "moral treatment." Three years later, in 1795, Pinel transferred to another French hospital, the *Hospice de la Salpêtrière*. Here, Pinel was able to continue his work. In terms of his pathological understanding of how MIPDs operate in the body, Pinel was very much so working within the somatogenic paradigm. Instead of originating in the brain, Pinel believed that mental illness originated in the bodily systems, usually from the gastrointestinal tract or peripheral nervous system (Gerard, 1997). Overall, Pinel is remembered as the individual responsible for initiating the social shift from understanding mentally ill people as "insane" to understanding these patients as people in need of love and care. However, mental asylums with sub-par conditions also existed in the New World during this time. Interestingly, there existed an American contemporary to Pinel that

accomplished many similar things in the newly-established America. This man's name was Benjamin Rush (1746 - 1813).

Benjamin Rush was a distinguished American medical practitioner and educator, but he is best known for advocating in favor of institutional reforms to mental institutions. Among those 56 people who signed the United States Declaration of Independence, Rush was one of the five physicians (Veith, 1988). His various medical endeavors - especially in the area of psychiatry - earned him the titles "The Hippocrates of Philadelphia" and the "Father of Modern Psychiatry." However, asylum reforms are not the only social justice issues Rush was involved in. He also wrote extensively about the death penalty, federal government, state-sponsored programs, women's rights, international policy, and slavery. Out of all of these pursuits, he only began to focus on the asylum reforms after he was elected to work at the Pennsylvania Hospital in 1783. Before his appointment, many of the conditions of American asylums were similar to those in pre-Pinel Europe. Some of the reforms instituted by Rush include: employment of patients, installing hot and cold water baths, and hiring personal aids for the patients, among others. In addition, scholars have emphasized his role in reshaping public opinion of the mentally ill:

Of major importance is the recurring theme of the curability of mental disease that Rush was able to impress on his students and readers and that came to supplant the long-held belief of "once insane, always insane." - Veith (1988)

The shift in public perspective from "lunatic" to "person" is also another important development that materialized from the Scientific Revolution. Later in the 19th century, Rush's crusade against the inhumane treatment of inmates in asylums was taken up by a woman named Dorothea Dix (1802 - 1887). Advocating on behalf of the mentally ill was likely a personal issue to Dix, who is rumored to have struggled with depression several times during her life (Parry, 2006). These episodes caused her to take a vacation to Europe in an attempt to regain her composure, where, incidentally, she met many people involved in these progressive social movements. When she returned to America around 1839, she submitted a series of "memorials" to state legislature, calling for changes to the existing American mental asylums. She also

published several works that were published and distributed among the public. These efforts resulted in institutional changes in many areas in the United States, including New Jersey, Louisiana, North Carolina, and Pennsylvania. Like Rush, Dix was also heavily involved with other social issues, including voter reforms and slavery.

5.2 Dark Operations

With the mention of fellows by the likes of Pinel, Rush and Dix, we are perhaps left with the notion that psychiatry has moved from a dark and barbarous past into a modern, gentle, healthy practice. However, this would paint an unrealistic picture of the field; recent medical practices have also fallen victim to inhumane conduct. To this effect, I would like to discuss eugenics, lobotomies, and insulin shock therapy. The first of these, eugenics, is "the practice or advocacy of improving the human species by selectively mating people with specific desirable hereditary traits" (Onion et al., 2017). The reason that eugenics is pertinent to our discussion of MIPDs is because individuals struggling with mental illness were often included as targets for these programmes. While we know nowadays that this sort of thing is a fool's errand, it hasn't always been this way, even in recent history. Eugenics started off in the early 20th century as a humanitarian project, and was sanctioned by many large governments, as well as the majority of the public. This is because people sincerely believed that bad traits such as criminal activity, poverty, and mental illness could be successfully bred out of the population. A website written by historians at the *History Channel* provides some good examples of the kinds of things people thought were a good idea:

In 1896, Connecticut made it illegal for people with epilepsy or who were "feeble-minded" to marry. In 1903, the American Breeder's Association was created to study eugenics. John Harvey Kellogg, of Kellogg cereal fame, organized the Race Betterment Foundation in 1911 and established a "pedigree registry" [...] prominent citizens, scientists and socialists championed the cause and established the Eugenics Record Office. The office tracked families and their genetic traits, claiming most people considered unfit were immigrants, minorities or poor. The Eugenics Record Office also maintained there was clear evidence that supposed negative family traits

were caused by bad genes, not racism, economics or the social views of the time. Onion et al. (2017)

Additionally, many governments around the world (Canada included!) implemented forced sterilization programmes:

From 1909 to 1979, around 20,000 sterilizations occurred in California state mental institutions under the guise of protecting society from the offspring of people with mental illness. Many sterilizations were forced and performed on minorities. Thirty-three states would eventually allow involuntary sterilization in whomever lawmakers deemed unworthy to procreate. - Onion et al. (2017)

This whole eugenics debacle was taken to its logical conclusion in the 1930s and 40s by Adolf Hitler, who used his totalitarian power to euthanize large portions of the population. His goal was to create a perfect "Aryan master race," and during the course of World War II, an estimated 300,000 mentally ill and otherwise handicapped people were murdered under his rule (Hohendorf, 2016). It is largely due to this incident that other nations were made aware of the dangers of eugenics. However, it unfortunately took many years after WWII ended to finalize the closing of many of these government programmes. The reason I mention eugenics here is because many of the people being "bred out" of the population were people struggling with mental illness. However, governing bodies of the 20th century did not just try to get rid of mentally ill individuals, they also tried to "cure" them using gruesome methods.

The first of these gruesome methods was the "ice-pick" lobotomy, so named because it could famously be performed with an ice-pick in a physician's office in less than 15 minutes. The goal of the lobotomy was to "cure" people suffering from mental illness. The theory behind it was that mentally ill people had unfavorable neural connections, and by severing them, doctors could cure the disorder. The procedure was originally designed by Antonio Moniz (1874 - 1955), a Portuguese neurologist, who won the Nobel Prize in 1949 for its development (Wikipedia, 2021d). However, the operation was originally quite costly, and required trephination, general anaesthetic, and experienced surgeons. However, this all changed in 1945 when Walter Freeman (1895 - 1972), an American physician, discovered that the same regions of the brain could

be severed using an ice pick from his kitchen. The demand for this new, speedy procedure was so high in America at this time that Freeman took his operation on the road. By the 1970s, over 40,000 people had been lobotomized in the US alone (Wikipedia, 2021d). Freeman's widespread application of the frontal lobotomy to patients suffering from all sorts of ailments (even headaches!) had left hundreds dead, and many more in a vegetative state. In the case of some poor decisions, the injury is only noticeable after the fact. This was not the case with the lobotomy. In 1948, not three years after Freedman began his version of the procedure, the American mathematician and philosopher Norbert Wiener (1894 - 1964) criticized the lobotomy on the grounds that people knew that it was wrong and inhumane, but they still did it to make the patients easier to care for. In his famous book *Cybernetics*, Wiener states:

[P]refrontal lobotomy ... has recently been having a certain vogue, probably not unconnected with the fact that it makes the custodial care of many patients easier. Let me remark in passing that killing them makes their custodial care still easier. - Wiener (1961)

The last item on our list of crimes against the mentally ill is "insulin shock therapy." To perform this operation, the patient was given large doses of insulin, which caused them to go into a coma. Often, these comas were maintained for days or weeks at a time. This is very obviously inhumane, alongside other risks of brain damage and death. Similar to the frontal lobotomy, this procedure was widely misapplied to all sorts of patients. Indeed, it is as Abraham Maslow famously stated: "If the only tool you have is a hammer, you tend to see every problem as a nail." While insulin-shock therapy may not have caused the same level of harm as the lobotomy, it still shows how psychiatry is a high-risk field, and that it can go to some dark places quite quickly if we are not careful.

5.3 Anti-psychiatry

It is in the context of these medically-sanctioned atrocities that we see the emergence of people willing to fight back against such practices. Although the term was not coined until 1967, the "anti-psychiatry" movement began to take shape in the early 20th century. Although many

people had protested the cruel treatment of mentally ill persons in the asylums for centuries, the anti-psychiatry movement takes this even further, saying that all psychiatric treatment for mentally ill people is damaging and unnatural (Wikipedia, 2021a). Some advocates even go as far as to reject the concept of mental illness entirely. The idea here is one of "cultural relativism," where what is considered inappropriate or mentally ill behaviour may be - to some extent - socially defined. A lot of the anti-psychiatrists' time was spent protesting the gruesome institutional methods previously described (lobotomies, eugenics, electro-convulsive therapy and insulin shock therapy). However, many diagnoses were also challenged: for example, until 1974, homosexuality was considered a mental disorder in the DSM. Nowadays, this seems absurd, but it exemplifies clearly how mentally ill behaviour can be culturally defined.

In summary, the historical understandings of MIPDs have been convoluted and mixed. Misunderstandings with regards to the pathology of these various conditions have lead to both positive and negative clinical advancements in treatment. On the social side, ancient Greek ideas of mentally ill people as patients was, for a while, overtaken by Christian supernaturalism that did not align with the scientific knowledge of the time. However, the recent emergence of rationalism during the 17th century has returned us to a more reasonable, somatogenic understanding, and as we shall soon see, eventually also to a humanitarian, psychogenic understanding.

6 A Tangent - Moon Madness Connection?

Before moving on to discussing our modern understanding of MIPDs, I want to go on a tangent, and say a few things about an obscure, yet interesting topic. Throughout history, mentally ill people have often been referred to as "lunatics," but where does this word come from? The root word from which lunatic is derived is the Latin word *luna*, which means "moon." The reason that the moon is connected to insanity is ultimately unknown, but has remained constant throughout history. Iosif and Ballon (2005) provide a good summary of this strange connection:

In the 16th century, Paracelsus wrote that "mania has the following symptoms: frantic behaviour, unreasonableness, constant restlessness and mischievousness. Some patients suffer from it depending on the phases of the moon." Lord Blackstone, an 18th-century English jurist, was the first to define a condition of madness exacerbated by the lunar cycle: "A lunatic, or non compos mentis, is properly one who hath lucid intervals, sometimes enjoying his senses and sometimes not and that frequently depending upon the changes of the moon." During the 19th century, the German psychologist Ewald Hering observed in his textbook of psychiatry that "with full moon, increasing mania." At the Bethlehem (or Bedlam) Hospital in London, inmates were chained and flogged at certain phases of the moon "to prevent violence." This barbarous practice was abolished only in 1808 through the efforts of John Haslam, the hospital's apothecary. Benjamin Rush, the father of American psychiatry, kept accurate records of patients' conditions during the phases of the moon but observed a behavioural association in only few cases.

This insanity-moon relationship is even present in Shakespeare's Othello:

It is the very error of the moon, // She comes more near the earth than she was wont. // And makes men mad.

Overall, this idea of the moon causing mental instability and madness does not have any empirical backing, and it isn't directly connected to the other ideas that I am developing in this paper, but I wanted to include it because I thought it was interesting.

7 Modern Understandings

I would now like to move on into how these various historical currents have come together to create our modern understanding of MIPDs. Most of the changes in these understandings parallel the progressions in the field of psychology. Due to the rise of sweeping, empirically-based research-programmes, the last two centuries have produced vast amounts of new technical knowledge, and the area of psychology is no exception. The "early days" of this field (beginning of the 20th century) saw the rise of Freud and psychoanalysis, along with B. F. Skinner and radical behaviorism. Despite their differences, both of these approaches emphasize the psychogenic understanding of MIPDs, which is the position most often taken currently. Also in the early 20th century, clinical psychology started to become a legitimate profession, and clinics began

opening up around the developed world. Of course, if clinical psychology is to be practiced in any standardized fashion, it would need some sort of authoritative text and governing body. Picking up from the work of previous thinkers on nosology such as Emil Kraepelin, the American Psychiatric Association published the first version of the *Diagnostic and Statistical Manual of Mental Disorders* in 1952. This work set out to characterize MIPDs in their entirety, and despite controversy, is an essential monument in the history of understanding human psychology and mental illness.

Needless to say, nosology on its own is not sufficient; cures and treatment methods are also necessary. Since the time of Freud, forms of therapy have become the most popular method of treating MIPDs (psychogenic understanding). Common today is a form of therapy called cognitive behavioral therapy. This style focuses on developing healthy coping strategies, emotional regulation, and resolving cognitive distortions. Recently, biomedical (somatogenic) explanations for MIPDs have been integrated with psychogenic explanations as well as social factors, creating the biopsychosocial model ("health psychology"). This interdisciplinary approach recognizes that psychology and MIPDs cannot be explained by any one factor in isolation, and instead seeks a more holistic perspective. As opposed to just pharmaceuticals and therapy, this model also emphasizes the role of healthy relationships, physical fitness, mental resilience, social circumstances, genetic predispositions, and habits (among other things). However, psychology has not progressed in a vacuum; social perspectives on MIPDs have also undergone significant changes.

In the last two decades there has been a shift in the way psychology and MIPDs are viewed by society at large (rather than a paradigm shift within the field itself). In the recent past, psychology as a field has made great advancements, but has remained a rather taboo topic of discussion in social settings. However, in the past several years, there have been numerous movements to "destigmatize" mental illness. A good example of this is the Bell "Let's Talk" campaign, which began in 2011 and was designed to: "engag[e] Canadians to take action to create positive change in mental health" (Bell, 2020). Overall, modern approaches to MIPDs are interdisciplinary and holistic, and MIPDs themselves have become socially-acceptable topics of discussion.

8 Personal Reflection

When I consider mental illness, I tend to emphasize the individual behaviour aspect. This is not because I believe mental health is based on only individual behaviour, but because I believe it to be more beneficial to take positive ownership and responsibility over things you can control, rather than focusing on those things that you cannot control. I also tend to have a distaste for pharmaceuticals (SSRIs, anti-psychotics, etc.), as they can permanently alter your brain chemistry in unexpected ways (ie. unstudied side effects). There are some cases where I believe pharmaceuticals are appropriate, but I think these cases are much more rare than people think, and that these drugs are very over-prescribed nowadays.

In my opinion, the best model for understanding MIPDs is the modern biopsychosocial approach. Ultimately, it seems that mental health cannot be tied exclusively to one thing; instead, many factors are involved, and a deficit in any one factor can be enough to cause issues (see: "Liebig's barrel"). Mental well-being is also tied to purpose, which is often defined by religious beliefs. This appears to me to be an important aspect that is often neglected in a secular understanding of mental health.

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