Author's Note:

I've always found my fascination with psychology narcissistic, if only because I am a brain fascinated by itself. But I've also been fascinated by the flaws in my own brain. Why do I have ADHD? Why was I depressed? What are those conditions? Questions like these drove my initial, cursory look into psychology years ago.

Because I fancy myself an artist, I feel the need to understand how people observe my work. It seems imperative that I understand perception if I want to create something that's primary purpose is to be perceived. These two interests have a natural intersection - psychology is the science of perception.

Like the Sword of Damocles, the threat of war is suspended over Europe. Everyone knows that war will fall, and when it does the world will end. Industrialization has created the means to kill hundreds of thousands of people, and yet there is still romance in war. The great powers have yet to come to blows. A complex system of alliances, created by Otto von Bismarck holds the sword of war aloft. But Bismarck is dead and incompetent egomaniacs and newly founded republics control the fate of Europe. A golden age of progress permeated by existential dread. This feeling is no more evident than in Vienna. Paradoxically both a sprawling industrial megalopolis and considered a societal backwater, Vienna is the capital of a weak, crumbling empire. In this city, in this atmosphere of dread, in the sooty cloud of industry, lives Sigmund Freud.

Freud lived in this golden age untouched by the industry it was built upon. He wasn't a factory worker - he came from wealth. He went to university, where he became a doctor. He read Nietzsche and Shakespeare in the coffee shops of Vienna. Freud partied with the elite, and the practiced on the elite. He smoked cigars and used cocaine. His life of opulence and leisure made the threat of war all the more ominous.

In 1885, Freud moved to Paris to study alongside Jean-Martin Charcot to further his knowledge of neurology. Charcot was known for his pioneering of hypnosis and the unconscious. The unconscious was the revolutionary idea that the mind was a iceberg, and we only observed the smallest fraction of it. After a year Freud moved back to Vienna where he and Josef Breuer practiced a more Austrian method of hypnosis. This school of hypnosis transformed into psychoanalysis and changed the world.

Psychoanalysis quickly dropped the idea of hypnosis and instead substituted free-association - just having the patient talk. The idea was that the unconscious mind exerted a force on everything you said and did, so simply talking with someone gave the doctor an insight into their problems. Psychoanalysis was also defined by reducing basic human motivation back to two primal urges - sex and death. This went against the romantic idealizations of human motivation that permitted the intellectual elite of Europe. Freud resigned himself to being an intellectual pariah eventually proven true - much like Darwin.

But it was not so. Freud and his ideas soon gained a following. Freud was not much liked in Vienna, the intelligentsia of Vienna thought that he was holding the city down - contributing to its backwater status. It was in Zurich that psychoanalysis really took hold. Lead by Carl Jung, newly minted psychoanalysts in Zurich started to communicate with Freud. Eventually, its influence expanded, and there were cells of psychoanalysts from Oxford to Harvard. But Jung was an ambitious man, and did not wish to live in Freud's shadow all his life.

Two years before Europe imploded in the Great War, Jung split from psychoanalysis and formed his own school of thought on the nature of the mind - analytical psychology. Instead of anatomical, organ-like divisions of the mind, he saw common themes as the structure. He called these shared themes Archetypes, the mixing of these creating the mind. However, the conscious/unconscious dynamic remained, and this idea still remains. The nature of the unconscious is an essential element of modern thought and philosophy.

The scientific quest to understand the nature of reality drove industrialization and defined the modern philosophy. Science created the periodic table of elements and artillery. Science is the study of an objective reality - one where the same conditions produce the same results, no matter what. Psychology is the scientific study of the subjective reality - how to people assemble their senses into a cohesive picture, and why are these pictures different from person to person.

Science wants to be objective, but scientists are still people, and people are subject to their interpretations of reality. In order to be able to apply science you must know how people interpret the world around them.

Our unconscious mind skews our view of reality in impactful ways that we are inherently unable to recognize, therefore we must learn to understand the nature of its alterations. Freud divided the mind into three organ-like structures: the ego, the id, and the super-ego. Freud also separated the mind into the conscious, preconscious, and subconscious - but these terms were distinct from the organs of the mind. If the ego, id, and super-ego were organs, then the states of consciousness were the fluids these organs secreted and operated with. Understanding the organs of the mind is imperative to understanding the makeup of the unconscious mind, and how it influences our perception.

The id is the ultimate source of our desires, the urge to seek pleasure, and so it follows that we must know why we want to seek out an understanding of the universe - we must understand that desire. The sexual instinct, Eros, "comprises not merely the uninhibited sexual instinct... but also the self-preservative instinct" (p. 55) because of life's desire to reproduce. The id seeks pleasure through positive means. It sees an attractive woman and says "I want that" or a bear and says "I don't want to die". The creative motivation is what we understand the easiest. It is the most readily observable. We generally accept that everyone is motivated by this aspect of desire. People already take this into account when they are considering their understanding of reality - rosy glasses, nostalgia, the honeymoon phase all refer to Eros warping reality. However, the Thanatos desire to destroy, "to lead organic matter back into the inorganic state" (p. 55) exists as well. The id seeks pleasure through destruction and death. It sees an enemy and wants him dead, it sees a sand casts and wants to kick it because life is a balance and the instinct to maintain this balance is ingrained in the human mind. The destructive desire is not as readily accepted as a distorter of reality. Most people do not see how this instinct can distort how they perceive a rival or even themselves. The destructive instinct can be applied to the self: suicidal people have their reality warped by the Thanatos instinct such that they wish to destroy themselves. These desires are the ultimate roots to every action we make, so it is also the root of why we wish to discover. Knowing the base cause of this desire for discovery is vital - the nature of its root may unconsciously influence the ideas science considers.

The ego censors our perceptions of the world, and to be able to understand the world, we must know what our mind keeps from us. The ego applies the principal of reality to our more basic desires, "what we call reason and sanity" (p. 30) is the ego censoring our id's desires. The ego filters out the actions that it deems unreasonable. For instance, if the ego believes that sharp glass will hurt, it will reject the urge to jump through a window. Since the ego censors based on its understanding of reality, then, to some extent, it will impose an unintentional and unconscious confirmation bias because ideas contrary to its reality will be reigned in. Despite this confirmation bias, however, the ego's understanding of reality had to be created at some point, so that means it is mutable, and must slowly learn more of reality with age. "Pain seems... to play a part" (p. 31) in determining what our ego censors. Pain is how our ego learns the nature of reality. The same way a child learns to avoid hot stovetops, the ego gets the nature of reality burned into it. The id, through the ego, seeks to avoid pain. The ego censors reality to avoid this pain, but as time moves forward, the ego learns to better define what causes the pain. To carry the analogy further, the child learns that it is not all stoves that cause pain, but only ones that are on. Because of the ego's desire to avoid pain, we must take this into account when examining reality. If an idea might cause us pain, we are likely to reject it out of fear of the pain, not because of how truthful the idea may be. When painful ideas and memories are "overtaken by amnesia" (p. 25) they can often leave behind fears or anxieties. In the instance of one man, repressed memories of early sexual experiences created an anxiety that his parents would know his thoughts. This anxiety created trouble in his life, but he was unaware of its origin because it was veiled from his view. When an idea seems troubling it is easier to dismiss - pain is bad. However, the pain has no influence on the validity of the idea, and a person could be dismissing a valid idea because of an unconscious desire to avoid that idea. When the validity of an idea can be disregarded so that the ego can avoid pain, it becomes self evident that we must understand the ego. If we do not understand the ego we have no ability to differentiate between concepts that are ridiculous and concepts that are valid but painful.

The ego-ideal, or the super-ego, is the source of shame in our minds, and if we wish to consider all ideas of reality, we must understand why some are taboo. The ego-ideal is the ideal person that everyone wants to live up to; the "identification with the [idealized] father" (p. 39) of their youth. When you are young you look up to your parents as the idealized form of a human being. Even if they eventually fall from this idealized place, the super-ego forms around them. In addition to other authority figures absorbed into its collective, the parents form the conscience of a person. The guilt comes from feeling like you have not lived up to their, and your, idealized "you". Understanding why people feel guilt is vital to understanding why ideas are taboo. Ideas are taboo because your parents would not approve of them. "The demands of the conscience... [are] experienced as guilt" (p. 49), and because guilt is not pleasurable, the ego and id seek to avoid the feelings while still striving after their desires. Guilt reigns in the ego and the id. The id says "I want her", the ego says "She's out of your league, try to catch her on a bad day", and the super-ego says "Whoa dude she's fourteen". Obviously, the lack of guilt is not a good thing; it is the moral compass. However, taboos can be limiting. No matter the proof, someone raised to be a Young-Earth Creationist will always feel guilt for believing evolution. Because that is not what his father would have wanted. The limitation of ideas is not a bad thing, but it is important to know the restrictions and limitations on those ideas. Guilt is good; too much guilt is bad. Awareness of how guilt is impacting your thinking is paramount.

The id creates our desires, our motivations in life. The ego applies reality to these desires. The super-ego applies society to these desires. This dynamic is fundamental to the way that Freud defined the human mind, and the way it processes stimuli. Motivation is how we prioritize everything, including our perceptions. We are more inclined to perceive what we have an unconscious attraction towards, and so the nature of perception is inseparably tied to the organs of the unconscious mind.

Opposite of these mental organs are Jung's archetypes. He proposed that our understanding of reality is based on a universal archetypal framework, and understanding that framework is vital to understanding how we view reality. These archetypes are universal shortcuts to understanding and structuring reality. The manor in which these archetypes manifest determines our perception of reality, so understanding them is understanding perception. Archetypal ideas form create shortcuts in our minds which allow for easy object identification, but also removes certain thoughts from the conscious mind. It is important to be aware of these archetypes so that we can prevent immediate, unconscious labeling of ideas.

People are primarily formed by the archetype of the self, but "No one can flatter himself... that he possesses a full understanding of it" (1942). The archetype of the self is what grants humans the gift of being self-aware. There, in the mind of a person, in an idea of what they are. It is what allows people to step back and decide what they want to do, who they want to

be, and what they enjoy. The self is not always the dominant archetype. Archetypes compete for control, and this can lead to things like "not being yourself" to more serious, long-term problems. Understanding how the archetype of the self functions is necessary to understanding how the mind functions, which is necessary to understand reality. The self is what you admit to yourself that you want, and understanding that can help you to realize that many beliefs you recognize is based on the self, not the truth.

The self casts a shadow, however. The archetype of the shadow "can falsify the actual truth in a most misleading way" (p. 6). The shadow is the aspect of the self that is not acknowledged; the desires, aspirations, and fears that we do not admit to ourselves that we have. But just because we do not admit to having them, does not mean that the archetype does not influence out actions in a noticeable way. The ability to define what our shadow is allows us further understanding of how we interpret stimuli. These hidden fears can warp our understanding of reality. We often cast our shadow on other people, perceiving them to be the embodiment of what we dislike, what we do not want to be. We warp reality to support out dislike of the person, or the idea. By understanding and defining the nature of the way our shadow distorts stimuli, we can further recognize why we accept certain ideas and reject others. Perhaps we dislike the idea for unconscious reasons, or because we project our unconscious prejudices onto that idea, and they are not actually present in the nature, the truth, of the idea. The shadow can distort ideas in a reflection of what we fear and hate about ourselves, not about the actually reality of the concepts. We are inclined to find laws in ideas that align with our shadow, even if the idea is true.

Every person outwardly displays the persona, "the ideal picture of a man as he should be" (p. 309) but not as he actually is, inwardly. People display, publicly, archetypes that they prefer to be seen as - the devoted husband, the famous author, the rebellious youth - but no one fits an archetype entire, not the archetype fully encompass all that they are. The husband may cheat, or think of other women, but he attempts to show no outward sign. People attempt to preserve their archetype, because not only is it what they prefer to been seen as, but it is also what they wish to be in life. Their ego-ideal, in a manner. They wish that they could fit this archetype fully, but in actuality they are formed of many archetypes, some of which are bound to contradict their persona. Knowing how a persona impacts people. First allows us to understand that we wish to preserve our own archetype, or to fit to it, and that ideas that contradict this archetype will be rejected. This, once again, allows us to consider why we are rejecting ideas - is it because they are false or because they contradict our public image? This allows us to consider a social element into our understanding of how ideas can be distorted.

Joseph Campbell saw narratives as the expression of human interaction, and applied Jung's ideas to fiction. The archetypal ideas permeate our works of fiction, and fiction is how we examine the nature of reality.

We look to heroes to look at ourselves, when we set about to accomplish a task, "the heroes of all time have gone before us... we have only to follow the thread of the hero-path" (c. 1). We use heroes as a positive example. Heroes can be lovers, warriors, or martyrs. The problems that heroes face are reflections of the problems that every person faces through the course of their life. Everyone falls in love, has conflict, or takes the blame. We see ourselves as the hero of our own stories, and because of this we compare ourselves with mythological heroes. We form both our heroes and our actions around this archetype of heroism. When a boy pretends to be Luke Skywalker, he is attempting to form himself to the heroic archetype. When looking at history we like to fancy people as heroes, but they aren't heroes. They are people. This quest for

heroes distorts how we see people in the past and in the present.

The villain is the obstacle in the heroes way, it is opposite them, and reflects the challenges in life, for "the cave you fear holds the treasure you seek" (The Power of Myth). The villain is opposite the hero because that is how we observe life to work; our biggest problems are the ones we are least equipped to deal with - they are opposite us. Darth Vader is a dark reflection of Luke: everything that he has the potential to be, but does not wish to become. Darth Vader is cruel to Luke's kindness. Vader's defining moment is a manifestation of the destructive instinct - killing the captain of the cruiser. Luke's defining moment is defined by the creative instinct - rescuing the princess. We see, in our life, the opposing forces most apparently because, due to their inherent nature, they oppose what we want to accomplish and we take note of these forces because of that. Our lives are defined by conflict, so we incorporate it into our understanding of reality.

The archetypal story has a structure designed to "carry the human spirit forward" (The Power of Myth). At the beginning of a journey, the hero receives a call to adventure, his life is upset from the status quo, and the hero reluctantly accepts the call to adventure out of their world. The hero then enters a new world, one where they are in danger and where they mature as a person. The hero then uses this knowledge and maturity to face trial and tribulations: they have grown as a person. However, the hero then descends into the "underworld". The underworld is a challenge so great, usually one of motivation and desperation; it is the greatest blow that the hero has taken on his journey, his lowest point. From this low, the hero is reborn, and with the wisdom he gained in the underworld, he overcomes one final challenge. This journey reflects the nature of being a person. We are thrust from the home, out into the world. Humans enjoy routine and habit, even though it is often better to break those habits. We know that we must break from this, but we also know it will be painful. Once we finally break from monotony, and into a foreign world, we adapt and begin to settle into monotony again. However, it always seems like we get hit the hardest as soon as things start to get going "right" on our lives. We learn the most from our lowest moments. We model our stories, heroes, and villains on the way we understand the path of life. The heroic path is simply a way to aid us in forming a narrative out of a series of unconnected, or seemingly unconnected events. We use stories to cope with the nature of reality, and so to understand stories is to understand how we remember reality.

Present psychology has evolved beyond these early methods, but the quest to understand perception is much the same. The reason is still the same - perception is vital to the personal application of science. But where psychology once looked to hypothetical organs and archetypes, it now looks to chemicals and neurons. Chemicals are able to reliably change the way people view the world.

Cocaine and amphetamines are used and abused because they "intensify pleasures and provide a since of well being... by increasing the activity of dopamine synapses" (84-85). Stimulant drugs are able to alter people's motivations and desires. They, usually, produce energy and motivation in users. The "desire to accomplish tasks" (Michael Kerner) is often reported by people who use stimulants to treat conditions like ADHD. This ability to alter motivations can drastically change the way we view the world. If I am not motivated I may view the world nihilistically, while motivation may instill me with a sense of optimism. Philosophies are often built on "universal" truths, as seen by its practitioners. If these truths are built upon motivations, then, if these motivations are altered, their philosophical views may as well.

Opium, and its derivatives, are known to "give rise to generally pleasant state, an overall withdrawal from reality, and decreased sensitivity to pain" (87). Suffering is a defining factor of

humanity, as humanity is defined by most philosophies. Buddhism says that desire causes suffering, so losing desire is essential to enlightenment and freedom from pain. Abrahamic religions say that all suffering is merely a test by God.. Star Wars says that suffering leads to corruption of good. If you remove pain and suffering from the human equation, the fundamental principle of many philosophies is undermined and rendered false. If there is no suffering, there is no need to lose desire. If there is no pain, God is not testing us. If there is no pain there are only Jedi, and no Sith. Opiates take suffering out of the equation. They, for however briefly the high lasts, render someone immune to pain and suffering and "reality". Human commonly define reality as by pain, and to remove that suffering is to remove and undermine a common definition of what reality is. For however briefly it is, an opiate high renders reality painless.

Hallucinogenic drugs "grossly distort" (89) the way our senses interpret and compile the electrical impulses that construct our perception of reality. The senses are often taken as the objective end-all be-all of the truth. Even though they are unreliable, our senses are all we got. Our mind constructs these electrical signals into a (usually) cohesive image of reality. Understanding how these chemicals interact and control our senses is necessary for the application of scientific knowledge.

Because chemicals have some element of reliability to them, they are one step closer to being an objective understanding of the subjectivity of reality. However, not all brains are the same. Surpluses and deficiencies of neurotransmitters and their receptors create different inclinations and tendencies - personality. If these differences are too severe, disorders manifest. Mapping disorders to chemical imbalances allows for reliable chemical treatment of disorders.

Freud actually purposed chemical treatment of disorders - he claimed that cocaine could cure opium addiction. Chemical treatment does not mean that psychoanalysis did not work - it did. The mind does not only control out perceptions, but is changed by them. While our understanding is more objective now, we still are still driven by the same motivations. A quest for objective truth requires an objective understanding of the mind.

When perceptions of reality deviate too far, the people who have these deviations suffer. By applying a scientific thought process to these deviation, Freud was able to help people. When war finally broke out in Europe, the romantic view of war was shattered. There was no heroism in artillery, no nobility in trenches. Shells exploded continuously. Soldiers lived amongst the dead. It broke people. Many of the young men sent to fight in the war came back hollowed ghosts of their former selves. They called it shell shock. We now call it Post Traumatic Stress Disorder. Psychology allowed people to heal from this mental shrapnel of the war. The same scientific mechanism that allowed for gas attacks allowed for the survivors to heal from the terror of the yellow cloud's slow approach toward the trench. Understanding how the mind functions helped Europe heal. Applying this scientific method to the mind helped cope with the horrors of its application elsewhere.

Psychology is necessary to apply a scientific understanding of the world, and to create that understanding. Revolutionary ideas often aren't accepted, and psychology can explain why many new ideas are often dismissed. Our mind is the lens which we view it all through, so understanding this lens allows for an unbiased look into reality. To be truly scientific, to form a truly objective understanding of reality, it is a requirement to also understand the way our mind works.