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Psychedelic Therapy from an Existential Psychological viewpoint

a theoretical analysis

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"One conclusion was forced upon my mind at that time, and my impression of its truth has ever since remained unshaken. It is that our normal waking consciousness, rational consciousness as we call it, is but one special type of consciousness, whilst all about it, parted from it by the filmiest of screens, there lie potential forms of consciousness entirely different. We may go through life without suspecting their existence; but apply the requisite stimulus, and at a touch they are there in all their completeness, definite types of mentality which probably somewhere have their field of application and adaption. No account of the universe in its totality can be final which leaves these other forms of consciousness quite disregarded. How to regard them is the question – for they are so discontinuous with ordinary consciousness... At any rate, they forbid a premature closing of our accounts with reality."

- William James, 1905, p. 305-306

Abstract

Clinical research into the therapeutic applications of classical psychedelics has slowly but steadily resumed over the last couple of decades. Continuing the research that went dormant in the late 1960's, modern trials are looking into the use of high-dose 'psychedelic therapy' for various psychological issues. Although it may be too early to conclude on its efficacy, research is finding the therapy physiologically and psychologically safe. However, there is little theory to fit the practice. This thesis attempts to explain theoretically how psychedelic therapy exerts its effects by applying an existential psychological model of psychopathology. Psychedelic therapy is based on the observation that positive outcomes are related to strong spiritual experiences, called 'mystical experiences'. This eluding concept is examined in depth, with its phenomenological characteristics described. Experiential research on mystical experiences is reviewed. An existential psychological model is presented, and it is discussed how mystical experiences can be therapeutic as explained by this model. Growth in adaptiveness of defenses toward existential conflicts is highlighted as a possible change-mechanism of psychedelic therapy. Implications and recommendations for future research are discussed.

Preface

As most Norwegians, I used to know very little about psychedelic substances. Furthermore, my assumptions and beliefs about them probably originated from myths or otherwise unreliable sources. Even after entering the clinical programme in psychology, I somehow believed psychedelics belonged to the category of 'dangerous' drugs such as heroin, amphetamine and cocaine. However, my interest in meditation led me to discover that among people with high regard in meditation-communities, many described having had pivotal experiences with psychedelics in their past. This made me look into the research on psychedelics, where I discovered an interesting, promising and for some reason somewhat shunned field of clinical research. As I have been working on this thesis, it has become increasingly apparent to me that my discovery did not happen in a vacuum. Psychedelics have again made their way into the cultural and academic discourse.

I hope my thesis will be of interest to those who wish to look into this field, laymen and academics alike. I wish to acknowledge all the researchers who have persevered in their research on psychedelics despite the possible professional marginalization or ridicule it may have caused. I must also acknowledge Roger Hagen for excellent supervision, and his willingness to help me write a thesis outside of his usual domain of psychology.

Stian Hyman Berg,

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Introduction

Many consider psychedelic substances such as LSD, mescaline and psilocybin first and foremost as dangerous drugs. What many people likely are unaware of is that these substances have an extensive history of medical and psychiatric research and clinical use (Grinspoon & Bakalar, 1979). They were once regarded as promising therapeutic tools and many clinical trials were conducted on their therapeutic properties. Then, for various reasons, research and clinical use of psychedelics went dormant. After decades of silence we are now witnessing the reemergence of research into the therapeutic properties of classical psychedelics. If the ongoing development continues it is likely just a matter of time before they again will be put in to clinical use.

Psychedelic therapy is a form of therapy that has no equal. After thorough screening and preparation, patients undergo one or a few extremely intensive and long sessions involving large dosages of classical psychedelics. The patient's particular intra- or interpersonal problems are not of special interest; rather the aim is to catalyze an overwhelming experience of a spiritual or existential character which is thought to be crucial for long term benefits. Obviously, this represents a radically disparate approach to enhancing mental health from traditional methods, and circumvents certain current issues such as frequent medication and side effects. This approach is not founded in any particular psychological theory, but has evolved as a consequence of the observed therapeutic changes in individuals for whom the therapy induces so-called 'mystical experiences'(Grof, 1980). However, this involves special challenges with respect to the academic community. As psychedelic therapist and researcher Stan Grof writes:

"*The definite spiritual emphasis of psychedelic therapy, its recognition of mystical states of consciousness, and the inclusion of what might appear to a superficial observer as elements of religious indoctrination, will certainly make this approach less appealing to skeptical and critical professional audiences. This will continue to be true until an adequate paradigm is developed that will make it possible to assimilate all the extraordinary new phenomena into the body of existing psychiatric knowledge and general scientific theory."* (Grof, 1980, p. 122)

Although historical and contemporary data so far suggests therapeutic use of classical psychedelics can be a safe and effective alternative to traditional methods of therapy (Grinspoon & Bakalar, 1979; Grob, Danforth, Chopra, & et al., 2011), the uniformed usually regard them with considerable skepticism. They are more likely associated with dangerous

drugs, addiction or abuse, so-called ‘bad trips’ with people jumping of buildings believing they could fly, and the like. Anecdotes range from those who have had hellish and psychotic experiences to those who have had the most meaningful experiences of their lives, and who because of psychedelics have turned their life around for the better. Careful scientific scrutiny is surely needed to evaluate the clinical potential of these pioneering methods, and this should involve evaluating how they fit into the pre-existing frameworks of different psychological theories.

In the first part of this thesis I will attempt to demonstrate why psychedelic therapy should be of interest to psychiatric professionals. I will explain what classical psychedelics are and describe their history of research and clinical use. I will evaluate the safety of administering classical psychedelics in a strictly clinical fashion, and present the recent reemergence of clinical trials. In part two, I will describe the phenomenological characteristics of ‘mystical experiences’, a term used for the overwhelming experiences that is essential to psychedelic therapy, and review experiential research on this topic. In part three, I lay out the framework of an existential psychological mode. In part four, I discuss how psychedelic therapy’s effects can be understood through applying the existential psychological perspective on mystical experiences.

Part 1: Background

Psychedelics, hallucinogens or entheogens?

Psychoactive substances with psychedelic effects go under many names; i.e. psychedelics, hallucinogens, entheogens, psychotomimetics and psychotropics (Nichols, 2004). The term 'psychedelic' was coined by psychiatrist Humphry Osmond, from the Greek 'psyche' (mind) and 'delos' (visible), and is usually interpreted as meaning 'mind-manifesting' (Osmond, 1957). Nomenclature is difficult because psychedelic effects are so many and varied that different psychoactive substances, human activities and physiological conditions can give rise to similar phenomenon (Grinspoon & Bakalar, 1979). Grinspoon & Bakalar suggest this definition:

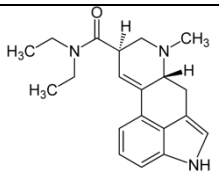
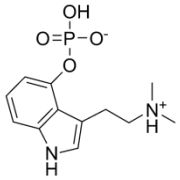
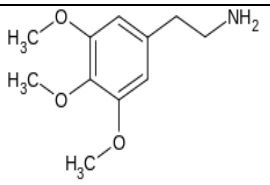
"…a psychedelic drug is one which, without causing physical addiction, craving, major physiological disturbances, delirium, disorientation, or amnesia, more or less reliably produces thought, mood, and perceptual changes otherwise rarely experienced except in dreams, contemplative and religious exaltation, flashes of vivid involuntary memory, and acute psychoses." (Grinspoon & Bakalar, 1979, p. 9)

Many add the connotation 'classical' to confine the term to substances with a chemical structure similar to naturally occurring substances like *psilocybin* and *mescaline,* and the semi-synthetic *lysergic acid-25* (LSD). Common for these substances is that they influence the central nervous system (CNS) through agonist or partial agonist action primarily upon the serotonin 5-HT_{2A} –receptors (Halberstadt, 2015; Nichols, 2004). Contemporary research varies in the use of terms pertaining to psychedelics. For the purpose of this thesis the term 'classical psychedelics' will be used: 'psychedelics' because it is more commonly known than 'entheogens' and more accurate than 'hallucinogens', and 'classical' because we focus on this substrate of psychedelic substances.

With regards to chemical structure, classical psychedelics can be divided into two classes of alkaloids (table 1): *Tryptamines* such as psilocybin, LSD, dimethyltryptamine (DMT) and dipropyltryptamine (DPT), and *phenetylamines* such as mescaline. For the purpose of this thesis, we will focus on research regarding LSD, mescaline and psilocybin, as they have the most similar profile of subjective effects, while excluding DMT and DPT.[1]

[1] DMT is excluded because it has a significantly shorter and different profile of subjective effects (Strassman, Qualls, Uhlenhuth, & Kellner, 1994), and DPT because it appears excerpt it influence differently upon serotonergic receptors (Thiagaraj et al., 2005) and has been less studied than the aforementioned. Also excluded

Table 1. Classical Psychedelics

	LSD	**Psilocybin**	**Mescaline**
Molecular structure			
Origin	Synthesized by Hofmann in 1938 from ergotamine, a chemical derived from the ergot fungus (Grof, 1980).	Isolated by Hofmann in 1958, naturally occurring compound in more than 200 species of mushrooms (Hofmann, Heim, Brack, & Kobel, 1958).	Isolated in 1897 by Heffter, naturally occurring compound found predominantly in cacti, i.e. the 'Peyote' and 'San Pedro' cacti (Nichols, 2004).
Average length of effects (Oral ingestion)	~8-12 hours (Grof, 1980)	~4-6 hours (Nichols, 2004)	~10-12 hours (Shulgin & Shulgin, 1995)

Effects

Classical psychedelics are capable of significantly altering the consciousness of human beings. Their effects are many, varied and often hard to describe. Depending on the particular substance, dosage and route of administration, they may differ in duration, intensity and course of effects (Nichols, 2004). Furthermore they are not purely dosage-related, but are heavily influenced by the individual user's personality, expectations and preparation (set), and environmental setting (Nichols, 2004). While early studies ignored 'set and setting' (Isbell, 1959), later studies found that a positively stimulating and supporting environment, and a positive set of attitudes, led to more positive experiences and less negative emotions (Leary, Litwin, & Metzner, 1963). This shows that the effects of classical psychedelics cannot be understood in purely psychopharmacological terms. As written by Nichols (2004), set and setting can be regarded as *primary* determinants of the effects. Regarding the psychological effects there has not been found reliable differences between classical psychedelics, however that does not necessarily mean no reliable differences exist, but rather that they are difficult to

is 3,4-methylendioxy-methamphetamine (MDMA) as it is not regarded to be a psychedelic, but rather an empathogen (Nichols, 2004).

demonstrate (Hollister & Hartman, 1962; Wolbach, Isbell, & Miner, 1962a; Wolbach, Miner, & Isbell, 1962b). For instance, some researches consider psilocybin more visual and euphoric, less emotionally intense, and less likely to induce panic reactions and paranoia, than LSD (Passie, 2004; Passie, Seifert, Schneider, & Emrich, 2002). What further characterizes classical psychedelics is quick adaption of direct tolerance and cross-tolerance, which is in accordance with their shared mechanism of action upon the CNS (Appel & Freedman, 1968; Halberstadt, 2015; Wolbach et al., 1962b). Some common effects are listed in table 2.

Table 2. Common effects of classical psychedelics, adapted from Isbell (1959) and Nichols (2004)

Somatic effects: increased body temperature, increased pulse and blood pressure, dizziness, frailty, tremor, nausea, tiredness, dilated pupils, increased tendon reflexes, paresthesias and blurred vision.
Perceptual effects: Alterations of form and color, difficulty in focusing, sharpened senses and synesthesias.
Psychological effects: Alterations of mood, increased emotionality, altered sense of time and space, difficulty verbalizing thoughts, depersonalization, dreamlike states, hallucinations.

At small doses, these effects are usually not very dramatic (Nichols, 2004). If the dosage is increased, the intensity of effects increases, but not in a strictly linear fashion (Griffiths et al., 2011). However, one reaches a point where the user more often than not begins to experience states of consciousness usually associated with dreams or instances of religious exaltation (Grinspoon & Bakalar, 1979). Such experiences have been called i.a. ‘peak’, ‘mystical’, ‘spiritual’ and ‘transcendental’ experiences. They are often said to involve experiencing the unity of all things; transcendence of time and space; sacredness; pure awareness; paradoxicality; and more (Griffiths, Richards, Johnson, McCann, & Jesse, 2008; Majić, Schmidt, & Gallinat, 2015; Pahnke, 1967; Pahnke, 1969). For the remainder of this thesis, I shall keep to the term ‘mystical experiences’ for labeling such experiences.

Historical perspective on psychedelic research

Naturally occurring psychedelics have been used by indigenous peoples for spiritual, ritualistic and healing purposes for millennia (Bruhn, De Smet, El-Seedi, & Beck, 2002; El-Seedi, Smet, Beck, Possnert, & Bruhn, 2005). In these cultures, psychedelics plants and fungi have almost without exception been viewed as sacred in origin (Johnson, Richards, &

Griffiths, 2008). This is likely related to the similarity of psychedelic and religious experiences. The mystical component of psychedelic experiences has been found to be nearly indistinguishable from spontaneous mystical experiences (Griffiths, Richards, McCann, & Jesse, 2006; Pahnke, 1967; Pahnke, 1969). Several researchers have even speculated in the possible role of psychedelic plants and fungi in the origination of religions and schools of philosophy (Grinspoon & Bakalar, 1979; Nichols, 2004). Indigenous peoples usually treat psychedelics with utmost respect, and administer their use in a ceremonial and ritualistic context. Some have argued that Indigenous peoples' long and apparently positive history with psychedelics is an argument for the safety of these substances when used in a structured setting. Studies have supported this assumption, as there is no evidence that indigenous people who engage in legal use of classical psychedelics have any clinical deficits or signs of mental health deterioration compared to indigenous people who do not consume them (Bouso et al., 2012; Halpern, Sherwood, Hudson, Yurgelun-Todd, & Pope, 2005).

From the mid-1800s, western scientists started identifying and researching psychoactive substances with psychedelic effects (Grinspoon & Bakalar, 1979). Of the classical psychedelics, mescaline was the first to be discovered and isolated in 1897 (Heffter Reseach Institute, 2015). However, what really marks the beginning of research into classical psychedelics was the accidental discovery of LSD by Swiss chemist Albert Hofmann in 1943. Following the discovery, Hofmann's manufacturing company distributed LSD to researchers with hope to find profitable applications (Grof, 1980). Soon, studies were published on LSDs effects on human functions, comparisons with other psychoactive substances, its relation to psychosis and schizophrenia, and its therapeutic properties (Grinspoon & Bakalar, 1979). In the beginning, the link between psychedelic-induced states of consciousness and psychosis, called the 'model psychosis'-approach, gained the widest interest. Serotonin was discovered to be endogonous to the CNS in 1953 (Whitaker & Mack, 1999), and since psychedelics act upon serotonergic receptors, this led to the fundamental hypotheses that abnormalities in serotonergic function could be involved in psychoses and schizophrenia, which marked a turningpoint in modern psychopharmacology (Majić et al., 2015). However, interest in the model psychosis approach dwindled as it became apparent that the pscyhedelic state had many properties separating it from psychosis (Grof, 1980).

Researchers instead directed their attention towards classical psychedelics' therapeutic properties. At this time, classical psychedelics were easily attainable for physicians and psychiatrists in Europe and the U.S., and widely regarded as promising tools for therapy and for understanding the human mind. The number of studies on LSD alone approximated 100 a

year after 1956, and by the time research was effectively halted in the late sixties, thousands of research participants had been administered classical psychedelics in basic and clinical research, resulting in more than 2000 research articles and six international conferences (Grinspoon & Bakalar, 1979; Grob, Greer, & Mangini, 1998; Nichols, 2004; Sessa, 2005). Although early research most frequently used LSD and mescaline, many other substances were soon identified and researched, such as psilocybin and DPT (Grof, Soskin, Richards, & Kurland, 1973; Unger, 1963).

In the early 1950's, LSD was introduced to clinical psychological practice as a supplement to intensify therapy and 'go deeper', and many clinicians were stimulated to experiment with LSD in their practice and research (Grof, 1980). In the years between 1950 and 1965, an estimated 40,000 patients were administered LSD-treatment in the U.S.A (Grinspoon & Bakalar, 1979). Patients also received LSD augmented therapy in Europe. For instance in Norway, where 379 patients received 'psycholytic' therapy between 1961 and 1976. A record shows that most of these patients were treated for obsessive neuroses (75,6 %), while other conditions treated include psychosis, sexual deviation, character disorder and drug dependency (Madsen & Hoffart, 1996).

Psychedelic treatments were generally administered according to two treatment modalities: 'Psycholytic Therapy' in Europe, and 'Psychedelic Therapy' in the U.S.A. Psycholytic therapy is characterized by administering a series of low doses (30-200 µg LSD equivalent) to facilitate therapy based on traditional psychoanalytical principles (Leuner, 1967). This approach was considered mainly for neurotic and psychosomatic disorders (Grinspoon & Bakalar, 1979). Psychedelic therapy, sometimes called 'Peak Therapy' is on the other hand characterized by high to very high doses (200-1500 µg LSD equivalent), administered only once or until a mystical experience is induced. This approach is not rooted in any classical psychological theory, but based on the clinical observations that such profound experiences lead to therapeutic outcomes (Leuner, 1967). Psychedelic therapy was considered helpful in reforming alcoholics and criminals, helping dying patients deal with depression and anxiety, as well as improving the lives of 'normal people' (Grinspoon & Bakalar, 1979). This thesis focuses exclusively on research with the psychedelic therapy approach, as it involves the mystical experiences that are of special interest.

Clinical trials included a wide variety of psychological disorders and issues, such as alcohol dependency (Krebs & Johansen, 2012), childhood autism (Sigafoos, Green, Edrisinha, & Lancioni, 2007), depression (Baker, 1964), increasing the well-being of terminal cancer patients (Sewick, 1997), sociopathy (Grinspoon & Bakalar, 1979) and schizophrenia (Fisher,

1970). Furthermore, classical psychedelics were administered to healthy individuals with the purpose of studying their effects on spirituality (Pahnke, 1963) and creativity (Harman, McKim, Mogar, Fadiman, & Stolaroff, 1966). Even though classical psychedelics were hypothesized to be of potential use for a wide variety of problems, the majority of research centered on two areas: Treating alcohol dependency and increasing the wellbeing of terminal cancer patients (Nichols, 2004).

When clinical psychedelic research was at its peak, few would deny that there appeared to be at least some promise in this method. However, by 1970 almost all research had stopped or was about to be stopped. Although it may be natural for some to assume this was a consequence of careful scientific scrutiny finding psychedelic therapy inefficient or dangerous, this was not the case. The truth is more likely a combination of various factors. A brief look at how this happened is warranted, because it involves crucial information relating to research into classical psychedelics.

One scientific factor that came into play was the increasing emphasis on randomized controlled trials (RCTs). The effects of psychedelics are so obvious that it is challenging to employ blinding procedures. Furthermore, the standards for control of variables were weaker than they are today. As a consequence, a lot of research from this time period has be criticized for lack of methodological rigor, especially in retrospect when compared to contemporary standards. However, such methodological challenges should in itself not have been reason to dismiss psychedelic therapy research, rather to improve the methods. The more compelling reasons why psychedelic research came to a halt are societal and cultural.

Classical psychedelics quickly spread from the research laboratories to the general public. The U.S.A. of the 1960's witnessed an explosion in recreational use of classical psychedelics, LSD in particular, as its extreme potency (approx. 6000 doses per gram) makes it easy to produce and distribute in large quantities (Grinspoon & Bakalar, 1979). Furthermore, the nature of the psychedelic experience is such that those who were not terrified became proselytes. The 'psychedelic movement' converged with other movements and sociopolitical factors of the time, such as the feminist movement and the Vietnam-War resistance, leading to a massive counter-culture movement, today commonly known as the 'Hippie-movement'. Among their leaders was the famous Harvard Professor Timothy Leary, who eventually was fired from Harvard. The media portrayed psychedelics with considerable sensationalism and strongly exaggerated their effects (Grob et al., 1998). Richard Nixon publically declared Leary "the most dangerous man in America", and in the general public, anxiety was rising that as a result of using classical psychedelics, young people would drop

out of their societal roles or become permanently impaired (Grob et al., 1998). In 1966, LSD was made illegal in California, and the rest of the American States and the world were quick to follow. Researchers on around 60 ongoing studies on psychedelics in the U.S.A. received letters from the Food And Drugs administration (FDA) telling them to terminate all ongoing studies (Fadiman, 2011). In 1970, the *Comprehensive Drug Abuse Prevention and Control Act* was passed, including the *Controlled Substances Act* with its scheduling system for drugs (Grinspoon & Bakalar, 1979). Classical Psychedelics were placed on 'Schedule 1', where they remain today. This scheduling indicates that they are considered among the most harmful and addictive drugs, and that they has as of yet no known medical application (D.E.A., 2015). The combination of illegality, restricted access, withdrawal of funding, and professional marginalization of psychedelic researchers led to the almost complete stop of psychedelic research on humans within a few years. Furthermore, the assumption that psychedelics could have medical applications was soon discarded from psychiatric and medical discourses (Grob et al., 1998). As commented by Strassman (2001, p. 28): "*They began as 'wonder drugs', turned into 'horror drugs', then became nothing.*"

Controversy aside, what can one determine from the massive amount of data collected in this period? Unfortunately, interpretation of the results is impeded by the lack of methodological rigor mentioned. However, stating that all this data should be disregarded would be going overboard. For simplicity's sake we will look at comprehensive reviews pertaining to the two most studied topics: treatment of alcohol dependence and increasing the well-being of terminal cancer patients.

Alcohol dependency

On the subject of using psychedelic therapy in the treatment of alcoholism and other addictions, reviews have been written by Grinspoon & Bakalar (1997) and Bogenschutz & Johnson (2015).

There is no doubt that classical psychedelics produce powerful immediate effects upon alcoholics, the question is whether these effects can lead to enduring change (Grinspoon & Bakalar, 1979). Reviews have generally reached the consensus that data from this period is too conflicting and lacking in methodological rigor to warrant any conclusions of efficacy, albeit there is no evidence that psychedelic therapy exacerbate alcoholism (Majić et al., 2015). However, a recent meta-analysis (Krebs & Johansen, 2012) identified six clinical trials from this period that reported treatment outcomes, demonstrating a consistent effect in favor of psychedelic therapy. The studies involve 536 male alcohol dependent in-patients, whereof 325

were randomly assigned to receive LSD-treatment and 211 to receive control treatment. All studies followed the psychedelic therapy method, administering a single high dose LSD session (median 500 µg). Control participants received low dose LSD (≤50 µg), ephedrine, amphetamine or placebo. There were considerable variability in the degree of preparation and debriefing of the subjects; Most received only brief orientation, often lacking a description of the possible range of effects that LSD can produce. There were also considerable variability in the setting in which the LSD sessions occurred; only in four studies did the drug session take place in comfortable surroundings with music. Lack of preparation and consideration of setting could reduce the safety and efficacy of psychedelic therapy. Despite that not all studies followed commonly agreed upon guidelines for psychedelic therapy (Johnson et al., 2008), Krebs and Johansen (2012) found significant effects from the first treatment follow-up that remained significant after 6 months, but not at 12 months post-treatment. 59 % of LSD treated participants were significantly improved at the first follow up, compared to 38 % in the control groups. This effect was homogeneous across 6 studies. Johansen and Krebs note that the effects of a single LSD-session compare well to daily use of traditional psychopharmacological treatments of alcohol dependence, such as naltrexone, acamprosate and disulfiram. Furthermore, they comment that the gradual 'fading' of effects over time appear to be present in other studies which were not included in this analysis for lack of methodological rigor. Firstly, this is in accordance with the 'afterglow'-effect, the observation that the effects of psychedelic therapy are particularly strong in the first weeks or months after treatment (Grof, 1980; Majić et al., 2015). Secondly, one could argue it is irrational to believe addiction is a phenomenon solely restricted to the individual, but rather that one also must take into consideration the individuals' psychosocial circumstances; the patient's immediate relations and life situation. As illustrated by Bruce Alexander's rat-park studies on addiction (Alexander, Coambs, & Hadaway, 1978), if a rat is put in positively stimulating environment with social opportunities, their rate of self-administrating rewarding drugs is largely diminished. The same can probably be said for human beings, and with that in mind, the results from this meta-analysis are encouraging. Classical psychedelics can be construed as a means to getting the addict rid of the habit, but keeping it off would probably require a more wholesome and systematic approach, taking more in consideration the sustaining factors behind the individuals' alcohol abuse.

Terminal cancer patients

On the subject of psychedelic therapy's potential for reducing anxiety and depression, and increasing the well-being of terminal cancer patients, reviews have been written by Sewick (1997) and Grinspoon & Bakalar (1997). Kast & Collins (1964) had the idea of treating terminally ill patients with classical psychedelics as an analgesic, based on the observations that LSD could distort the sense of body boundaries (Kast & Collins, 1964). Furthermore, they discovered that in addition to powerful immediate and short-term (~3 weeks) analgesic effects, some of the patients appeared to lose their fear of death. Further inquiries were in accordance with this observation, and furthermore discovered a positive influence on sleep (Kast, 1967). Later studies which employed a more wholesome psychedelic therapy approach, considering set and setting and including follow-up therapy, replicated these findings and found positive effects on depression, anxiety, psychological isolation and tension (Pahnke, 1969; Pahnke, Kurland, Albert, Goodman, & Richards, 1969; Pahnke, Kurland, Unger, Savage, & Grof, 1970). In one study, evaluating the effects with regard to fear, anxiety, depression, pain and fear of death, one-third dramatically improved, one-third improved moderately, and one-third did not improve (Pahnke, 1969). Some researchers claim that while most patients experienced pain reduction and improved mood, increased acceptance of death was most prominent in those subjects who had mystical experiences (Grof, Goodman, Richards, & Kurland, 1973). These studies were not placebo controlled due to ethical considerations, and are subject to criticism on methodological rigor.

Although these findings are not conclusive evidence of efficacy, they demonstrate that not all previous research on psychedelics needs to be completely disregarded. Furthermore, on the subject of treating alcoholism or increasing the well-being of terminal cancer patients, we see that historical research has achieved encouraging results that demand continued scientific exploration.

Psychedelic dormancy and resurrection: Contemporary research

While human research was discontinued or took place in private European clinics, research on animals led to a much richer understanding of psychedelics' neuropharmacology (Grinspoon & Bakalar, 1979). The resurrection of human trials began as researchers gained approval to examine the fundamental physiological and CNS-effects of psychedelics on humans (Mash et al., 1998; Strassman, 1991; Strassman & Qualls, 1994; Strassman, Qualls, & Berg, 1996). More studies soon followed in the areas of basic cognitive neuroscience (Carter et al., 2005a; Carter et al., 2004; Carter et al., 2005b; Gouzoulis-Mayfrank et al., 1998; Gouzoulis-

Mayfrank et al., 2002; Umbricht et al., 2003; Wittmann et al., 2007), model-psychosis (Gouzoulis-Mayfrank et al., 2006; Gouzoulis-Mayfrank et al., 2005; Gouzoulis-Mayfrank et al., 1998; Vollenweider, Csomor, Knappe, Geyer, & Quednow, 2007; Vollenweider et al., 1997; Vollenweider, Vollenweider-Scherpenhuyzen, Babler, Vogel, & Hell, 1998; Vollenweider, Vontobel, Hell, & Leenders, 1999) and spirituality (Griffiths et al., 2006). Griffiths et al. (2006) demonstrated that a single high-dose psychedelic session could give rise to mystical experiences with lasting personal and spiritual significance. From that point, the jump to new clinical trials into therapeutic properties was short. At the turn of the millennium, with new documentation on the safety of administering classical psychedelics to humans, several clinical trials were approved to investigate their therapeutic effects. With this the renaissance of psychedelic therapy research was a fact.

Several pilot RCTs on the therapeutic potential of psychedelic therapy have been published during the last 10 years; on existential anxiety and depression in relation to terminal cancer (Gasser et al., 2014; Griffiths et al., 2011; Grob et al., 2011), depression (Osório et al., 2015), obsessive compulsive disorder (Moreno, Wiegand, Taitano, & Delgado, 2006), cluster headache (Sewell, Halpern, & Pope, 2006), nicotine dependency (Johnson, Garcia-Romeu, Cosimano, & Griffiths, 2014) and alcohol dependency (Bogenschutz et al., 2015). All of these show promising and encouraging results. However, these are pilot studies which involve small populations, and to some extent vary in their blinding-procedures and control of variables, leading to low degree of generalizability. However, the methodological designs are generally stronger than their ancestors, and with future studies involving greater number of participants, it is likely that some of these lines of research will be able to demonstrate efficacy to a sufficient degree to warrant their prescription for certain psychological conditions. In the U.S.A., FDA 'Phase II'-psilocybin studies on terminal cancer patients have been finished and await publication (Richards, 2015). 'Phase III' will involve larger studies on multiple sites, and upon completion will signify that this approach is close to being available for prescription in the U.S.A (FDA, 2014). Researchers report that the biggest obstacle to research is funding, as this research is completely dependent on private funding (Nichols, 2014). The patents of classical psychedelics have run out, so there is little commercial interest in this research. It can be noted that if the psilocybin-studies on psychedelic therapy for terminal cancer patients successfully completes phase-III studies, it will be the first psychopharmacological substance to do so without backing from big pharmaceutical companies.

Parallel to the resurgence of clinical trials, modern neuroimaging methods that were

not available to former researchers are being used to better understand how classical psychedelic drugs impact upon the brain. A group of researchers at Imperial College London have conducted a series of neuroimaging studies into the neurological correlates of psilocybin. They have observed decreased activity within the *Default Mode Network* (DMN), including key regions like the posterior and anterior cingulate cortices (PCC and ACC) and medial prefrontal cortex (mPFC) (Carhart-Harris et al., 2012). Normally, these regions are highly active, functionally connected and synchronous in their activity. Carhart-Harris & Friston (2010) suggest this can be treated as the neural correlate of 'ego integrity', relating to the psychoanalytic construct of 'ego' or 'sense of self'. The decreased DMN activity, functional connectivity and synchronicity observed upon ingestion of psilocybin are therefore considered to be neural correlates of the ego disintegration which is a hallmark of psychedelic-induced mystical experiences (Carhart-Harris & Friston, 2010).

Current models of emotional regulation implicate the PFC and ACC in cognitive, top-down regulation on emotional responses through connectivity with the amygdala and dorsal raphe. Vollenweider & Kometer (2010) suggest that classical psychedelics can be helpful for recovery from depression by normalizing the top-down regulation from PFC and ACC upon amygdala activity.

Safety and dangers

Skepticism regarding the therapeutic use of classical psychedelics often revolves around safety issues. Furthermore, information from trusted sources like governmental departments often paints a grim picture of the effects of classical psychedelics when taken recreationally. For instance, the Norwegian Public Health Institute writes very little about possible beneficial effects, but describe that the user may alternate rapidly from intense happiness to anxiety, panic and strong depression, that LSD may occasionally induce serious and long lasting psychotic episodes, and flashbacks that occur as late as years after drug use (Folkehelseinstituttet, 2011). The National Institute on Drug Abuse (NIH) writes nothing about positive or mystical experiences, but do write that some users *"…experience severe, terrifying thoughts and feelings of despair, fear of losing control, or fear of insanity and death while using LSD*" (NIH, 2014). Based on the aforementioned research, this appears to be an unjust and imbalanced portrayal of their effects.

Many have written about adverse events related to recreational use, but not as much with regards to careful and structured clinical use. Distinguishing the differences in risks and

safety between the two can be difficult. I will first examine the research regarding the safety and dangers of clinical use, and then take a brief look at new research regarding use of classical psychedelics as a whole in population studies. Those interested in more thorough reviews are directed to Johnson et al. (2008), Strassman (1984) or Halpern & Pope (1999).

Safety and dangers of clinical use

Physiological tolerance

Classical psychedelics are considered physiologically safe substances, there is no evidence indicating that they do harm to any human organ (Johnson et al., 2008; Nichols, 2004). As have been mentioned, somatic effects occur, such as nausea, tremor, blurred vision, increased systolic and diastolic blood pressure and pulse, etc. However, even at doses that give powerful psychological effects, somatic effects are relatively small and insignificant (Johnson et al., 2008; Nichols, 2004). There is also a considerable history of treating patients with an elevated physical vulnerability, such as terminal cancer patients and seriously alcohol-dependent patients, that has not yielded negative physiological outcomes (Johnson et al., 2008).

Dependence

Classical psychedelics are not considered to be addictive; they do not entail compulsive drug-seeking; are not reliably self-administered in non-human trials; and are not associated with a known withdrawal syndrome (Johnson et al., 2008; Nichols, 2004). There is little to suggest that exposing humans to classical psychedelics will make them physiologically or psychologically dependent. To illustrate this further, Nichols (2004) paints a picture of the common course of use among Americans: Most come in contact with classical psychedelics in their early 20's, and engage in an initial experimentation phase. The majority discontinues use after this phase, and very few continue to their late 20's. Those who continue are characterized by describing that they use psychedelics for the purpose of personal and spiritual development, to gain personal, religious or philosophical insight, and increase self-understanding. With regards to frequency of use, the so called "Guild of Guides" recommends a minimum of 6 months interval, and an authority on the subject writes that the more profound the experiences, the longer you should wait (Fadiman, 2011). This paints the picture of a very distinct pattern of use from the obsessional use associated with rewarding substances like amphetamine, cocaine and opiates. In a recent RCT of psilocybin's acute and long-term effects, Griffiths et al. (2006) found that psilocybin did not produce a classic euphorigenic profile of effects. Although they did find that psilocybin could occasion experiences that are

rated as highly valued. Ultimately, there is no evidence that suggests psychedelic drugs are particularly addictive.

Acute psychological stress

The most likely adverse effect associated with classical psychedelics is having a reaction characterized by anxiety, dysphoria and/or paranoia (Johnson et al., 2008; Nichols, 2004). Moments or brief periods of anxiety during a session is normal, considering that the effects can be overwhelming, and is not considered a problem. However, sometimes a negative reaction lasts longer and is more permeating. This is often called a 'bad trip'. Reactions considered as bad trips do not outlast the immediate effect of the drug (Grinspoon & Bakalar, 1979). Usually, recovery is quick, even after the most horrifying psychedelic sessions. However, it should be stressed that such experiences can be immensely upsetting, and in uncontrolled settings it is not hard to imagine that profound anxiety can lead to potentially dangerous behavior, and there are numerous anecdotes of this happening. However, in supervised clinical settings, it is hard to find any evidence of serious consequences caused by irrational behavior. In most cases, bad trips go over by themselves or can be talked down (Nichols, 2004). Occasionally, the therapist might choose to administer benzodiazepines, which also ends the bad trip (Johnson et al., 2008; Nichols, 2004). It is difficult to find prevalence data on 'bad trips' in clinical trials, and this would depend on the criteria for distinguishing bad trips from normal anxiety reactions. In a recent clinical trial, 3 of 36 participants stated they would not want to repeat an experience like that again, but still rated the experience as personally and spiritually meaningful, and as not having decreased their sense of well-being or life-satisfaction (Griffiths et al., 2006). However, it is doubtful their experiences correspond to the notion of bad trips as they are described by recreational users.

It is interesting to note that some regard bad trips as *more* valuable than good ones, seeing the bad trip as an opportunity to face one's fears and achieve a sense of coping with, and insight into, fears and failings (Grinspoon & Bakalar, 1979; Grof, 1980). Perhaps this explain why the subjects in Griffiths et al.'s (2006) study who had intense anxiety reactions still stated they found them to be valuable and even an indispensible part of the experience.

The occurrences of bad trips are furthermore related to dosage, set and setting. Thus the risk of bad trips can be reduced by adopting different harm reduction principles. These sorts of principles are always used in modern trials, and include having a good working alliance with the therapist present; a setting which is comfortable and aesthetically beautiful; listening to a carefully selected program of music; being prepared for the range of effects that

can occur; and so on. A thorough report on guidelines for safety in psychedelic therapy-research can be found in Johnson et al. (2008).

Psychosis and depression

A known risk with classical psychedelics is that they may provoke onset of psychosis, lasting anything from days to months (Nichols, 2004). Though it is hard to determine causality, research suggests that such reactions happen to individuals with premorbid psychiatric conditions. For instance, one study compared 21 people who suffered LSD-psychosis with 21 suffering from schizophrenic psychosis, and found they were nearly indistinguishable in personality, previous history, and outcome (Lavender, 1974). It is unclear whether an induced psychosis in vulnerable individuals would have happened at some point in absence of psychedelic use, or if it represents a premature onset of an unavoidable psychotic breakthrough. However, as opposed to bad trips, the provocation of psychosis is extremely rare in well selected and prepared populations. One estimate based on a survey of psychedelic researchers have indicated the incidence of LSD-related psychosis to 0,8 per 1000 (Cohen, 1960). Among patients undergoing psychotherapy, the same author gives an estimated incidence rate of 1.8 per 1000. There are however limitations to the estimates from this survey: 44 out of 62 researchers responded, and it is based on research conducted before researchers started employing harm reduction principles such as considering set and setting. McGlothin and Arnold (1971) reports one LSD-induced psychosis outlasting 48 hours in a population of 247 participants and patients in LSD research.

It has also been considered a risk that psychedelics can induce the onset of depression, possibly leading to eventual suicide. Cohen's review (1960) reports the rate of suicide and suicide attempts at respectively 1.2 and 0.4 per 1000 participants.

In conclusion, there is as yet no evidence indicating that careful clinical use of psychedelics causes psychosis or depression independently. The etiology of these types of serious mental illnesses are likely very complex, and one should not rule out the possibility that difficult psychedelic sessions can contribute to their precipitation, especially in vulnerable individuals. This is why serious mental illness such as schizophrenia or bipolar type 1 disorder, or family history with such illnesses, is considered a contraindication for psychedelic therapy at the time being (Johnson et al., 2008). Researchers who have reviewed the course of adverse reactions and long-term consequences following supervised clinical research with psychedelics conclude that if any long term adverse consequences occurred, they are benign (Halpern & Pope, 1999; Strassman, 1984).

HPPD and flashbacks

Another potential risk of classical psychedelic use is *Hallucinogen persisting perception disorder* (HPPD). In short, HPPD is characterized by re-experiencing perceptual effects similar to those that occur under the influence of classical psychedelics (APA, 2013), but has also been related to use of other types of drugs (Annis & Smart, 1973; McGuire, Cope, & Fahy, 1994). Symptoms usually involve geometric imagery, motion-perception deficits, halos, afterimages and flashes of color (Baggott, Coyle, Erowid, Erowid, & Robertson, 2011). The evidence for HPPD is unclear, but it is considered relatively rare, as few cases are reported considering the millions of doses of classical psychedelics that are consumed every year (Halpern & Pope, 2003; Nichols, 2004). Some small degree of visual abnormalities in the time after using classical psychedelics are reported by many recreational users, but these are negligible and lack clinical relevance to warrant an HPPD diagnosis (Nichols, 2004). The term 'flashback' is sometimes used interchangeably with HPPD. Halpern & Pope's (2003) has reviewed the evidence for HPPD and flashbacks, and note that because the term flashback has been defined in so many ways, it is basically worthless, and makes it very difficult to find the true incidence of the disorder. However, they conclude that for some individuals, a long lasting HPPD syndrome can occur, with persistent perceptual abnormalities similar to those that arise under immediate drug effect (Halpern & Pope, 2003). Johnson et al. (2008) reports that the prevalence of HPPD is much lower in clinical populations than among recreational users, possibly reflecting confounding variables such as poly-drug use and underlying psychiatric conditions. In recent clinical trials with psilocybin (Griffiths et al., 2011; Griffiths et al., 2006; Grob et al., 2011; Johnson et al., 2014), and a review of 500 long-term users of peyote among native Americans (Halpern, Sherwood, Hudson, Yurgelun-Todd, & Pope Jr, 2005), none has showed signs of HPPD. According to Nichols (2004), flashbacks can persist for months, and some cases years, but it appears to be no relationship between the frequency of use and rate of occurrence (Nichols, 2004). There is neither any neurological explanation that ties these symptoms to use of classical psychedelics, or explains how they can appear months or years later. In a study of 120 U.S. adults complaining of persistent visual symptoms (Schankin, Maniyar, Hoffmann, Chou, & Goadsby, 2013), only 5 % had previously used LSD, compared to over 10 % in the general U.S. population (Johansen & Krebs, 2015). This suggests that visual abnormalities are phenomena that primarily occur *without previous use of psychedelics*. However, when people have had previous experience with classical psychedelics they are perhaps liable to attribute their problems to this previous use, especially when taking into consideration that diagnostic manuals suggests such symptoms can occur

years after use (APA, 2013). As of today there is no treatment for HPPD, but the symptoms usually disappear by themselves, and most people find them to be harmless disturbances (Nichols, 2004).

Population studies

Changing the perspective to the use of classical psychedelics as a whole, one way to evaluate the safety of these substances is to look at large populations, and see if those who use classical psychedelics in any way stand out. The problem is of course that users of psychedelics generally stand out *before* they use psychedelics, so one has to control for all sorts of pre-drug-use factors. Johansen & Krebs (2015) investigated the answers of 130.000 American respondents to the 2001-2004 *National Survey on Drug Use and Health* (NSDUH), whereof 14 % had experience with psychedelics. After having controlled for a wide range of confounding variables, such as use of other drugs, socio-demographic and psychological factors, education, etc., they ended up with 156 people who fit their criteria (Nesvåg, Ystrøm, & Bramnes, 2015). They examined the relationships between lifetime use of psychedelics and past year psychological health, use of psychological treatment and DSM-IV symptoms. The results indicated that recreational use of psychedelics was not an independent risk factor for developing psychological problems. Furthermore, the data indicated that lifetime users of psychedelics had a slightly better psychological health in the past year, which might reflect the beneficial effects that have been reported in clinical trials. Nesvåg et al. (2015) have critized Johansen & Krebs, claiming they introduced over-adjustment bias by controlling for lifetime other illicit substance use. Hendricks, Johnson & Griffiths (2015a) has responded to this critique, and argue that that failing to control for lifetime other illicit substance use would represent a failure to account for suicide factors that overlap with, but do not appear to be caused by, classical psychedelic use. Johansen & Krebs (2015) conclude that the NSDUH survey does not support the assumptions that psychedelics independently cause lasting psychosis, depression, anxiety or HPPD. A second analysis of NSDUH respondents, this time 190.000 respondents to the 2008-2012 survey, replicated these findings, and furthermore demonstrated that lifetime use of classical psychedelics was associated with less psychological issues and less suicidal ideation and reduced likelihood of past month psychological distress (Hendricks, Thorne, Clark, Coombs, & Johnson, 2015b). In continuation of their study, Hendricks et al. (2015a) published a second analysis which focused exclusively on psilocybin, as it is the classical psychedelic that most likely may be a candidate for future medical use in the U.S., the U.K. and other nations (Bogenschutz et al.,

2015; Grob et al., 2011; Johnson et al., 2014). This narrowing of focus was associated with a reinforcement of aforementioned positive associations, indicating that among the broader class of classical psychedelics, psilocybin may hold an especially therapeutic potential.

These populations studies are limited by their reliance on self-report, and it is of course impossible to control for possible underlying factors that could contribute to both use of classical psychedelics and the beneficial effects observed. For instance, Hendricks et al. (2015) note that users of psychedelics have been found to have less materialistic values and greater emphasis on spirituality, which may be seen as predrug-factors that contribute to these group differences. However, users of classical psychedelics also report engaging in more risk behavior and using other illicit substances, which should count for the opposite. As Hendricks et al. (2015) concludes, this picture is undoubtedly complex.

Summary

Evidence appears to indicate that classical psychedelics, in well selected populations and highly structuralized clinical settings, have the unusual capacity of producing immense psychological effects without significant toxicity or potential for dependence or abuse. This is in itself remarkable. Furthermore, historical and contemporary research strongly suggests that psychedelic therapy can make out a safe and effective treatment alternative for a range of psychological problems. However, there are risks involved. Even in well-selected and prepared populations, a substantial proportion experiences intense anxiety or other negative emotions, and without professionals with proper training or under unmonitored settings, it is not difficult to imagine such reactions escalating into potentially dangerous behavior. The relative safety of clinical use of classical psychedelics must not be taken as an argument for the safety of unsupervised recreational use. The full range of potential clinical applications is unknown, and necessitates continued research. Studies that might give data to conclude on psychedelic therapy's safety and efficacy is underway, but regardless of their results it is apparent that something interesting is going on when people ingest large doses of classical psychedelics. At this point we change focus towards the mystical experiences associated with psychedelic therapy.

Part 2: Mystical experiences

Throughout recorded history, individuals belonging to different cultures and religions have reported states of consciousness and experiences of reality radically different from those of normal waking consciousness (Levin & Steele, 2005). Mystics, saints and laymen have described brief or lasting experiences of a kind of complete fulfillment, called for instance 'enlightenment', 'satori' or 'The Peace of God' (Levin & Steele, 2005). Was it not for their independent discovery and description it would perhaps be hard to believe that such experiences exist and are attainable. Despite mystical experiences having been written about extensively by writers and investigators like William James (1905), Carl Jung (1938) and Aldous Huxley (1954), one can speculate that most humans walking the earth have had little idea they even exist. They have been said to be attainable through dedicated spiritual practices, such as yoga, meditation and fasting, or to occur spontaneously (James, 1905). Now it has been demonstrated that they can be induced by ingestion of classical psychedelics (Griffiths et al., 2011; Griffiths et al., 2006). In essence, it appears that classical psychedelics on occasion give the individual a temporary perspective that formerly was reserved for 'enlightened' beings. As said by psychedelic therapist and researcher, Williams Richards (MAPS.org, 2013, 11:09):

"When sitting silently beside research volunteers, when their everyday consciousness have been transcended and mystical experiences are occurring, it is no exaggeration to say that I humbly feel as though I am sitting beside the Buddha under the Bodhi tree as enlightenment is dawning, or sitting beside saint Paul on the road to Damascus, or beside Isaiah during his temple vision."

Different traditions have named these types of experiences differently[2], and although they may also vary in how they understand and conceptualize mystical phenomena, they do appear to share a lot of common ground: Across all religious or spiritual traditions, recollections of mystical experiences include that they evoke a perception that consciousness in reality extends beyond the physical boundaries of the human body (Levin & Steele, 2005). This transcendence of one's normal sense of identity, often called self- or ego-transcendence, is fundamental to the experience. Replacing this identity is often a sense of merging with the

[2] *Clear light, Cosmic Consciousness, Deautomatization, Fana, Flow experience, God experience, Intensity experience, Inward Light, Living Flame of Love, Love-fire, Mystic Experience, The Numinous, Objective Consciousness, The Peace of God, Peak-Experience, Samadhi, Satori, Shamanic Ecstasy, The Silence beyond Sound and Sublinimal Counsciousness (Levin & Steele, 2005).*

'source of being' (Levin & Steele, 2005). The experience is often said to be ineffable: that it is beyond both normal perception and understanding (James, 1905). At the same time, it is also said to be:

"more immediate, more present, more real than other experiences – a quality of authenticity that puts it beyond all doubt…"(Levin & Steele, 2005, p. 89).

When trying to describe mystical experiences, the limits of language become apparent. After all, what good are words if there is no common understanding of their meaning? And in this case, this understanding is allegedly beyond our normal perception and the boundaries of our understanding. About his own mystical experiences, Richards (2009) writes that words become little more than metaphysical poetry; that he feels the experiences could be better communicated by composing a symphony or molding a piece of sculpture. But as researchers interested in psychedelic therapy and mystical experiences, we need to define as clearly and distinctly as possible what is meant by this construct. Despite the claimed ineffability, most individuals who have had mystical experiences very eagerly attempt to describe them, and based on their descriptions common phenomena can be identified. The conceptualization of mystical experiences stems in large part from the work of philosopher Walter T. Stace (1960). Based on descriptive characterizations of spontaneous mystical experiences, and building on the earlier work of William James (1905), Stace (1960) presented a thorough accord of their phenomenological characteristics. Building on Stace's work, Walter T. Pahnke (1963) identified nine characteristics of mystical experiences, which he claimed were identical for both spontaneous and psychedelically induced mystical experiences. Richards (2009) collapsed these nine categories to the six presented below. These constitute a phenomenological description of mystical experiences which most contemporary psychedelic researchers can relate to. When expressed in words, mystical experiences appear to include these six experiential categories (Richards, 2009):

1. Unity
2. Transcendence of time and space
3. Intuitive knowledge (the noetic quality)
4. Sacredness or Awesomeness
5. Deeply felt positive mood
6. Ineffability and paradoxicality

For the purpose of psychedelic research or therapy, a complete mystical experience can be said to have occurred when an individual's state of awareness, as expressed and analyzed for content or measured by psychometric instruments, include all six categories (Richards, 2009).

Exactly how people make sense of their mystical experiences may vary, but they often entail a certain set of ontological assumptions which usually come to the experiencer as insights (Richards, 2009). These may not be verifiable or falsifiable. However, the aim is not to evaluate their validity, but how these experiences and the insights or assumptions they carry might impact human psychology. While most human beings are likely to hold ontological assumptions that are intuitive, quantum physics have demonstrated that reality can be rather counter-intuitive (Tegmark, 2014). I argue that the assumptions often mediated through mystical experiences are *more* in accordance with a coherent scientific view of reality than most normative assumptions (whatever they are). Even if this is not the case, it could be argued that these assumptions are conducive for mental health. As Thomas Mann put it:

"*Whether this belief is true or not, man would be well-advised if he behaved as though it were."* (Mann, 1954, 3:58).

The ontological assumptions must not be understood as mystical per se, but simply appears to be related to the intuitive view of reality that is brought about by mystical experiences. In the following I attempt to elaborate on the phenomenological characteristics of the experiential categories as they have been described by James (1905), Stace (1960), Pahnke (1963) and Richards (1966; 2009). The reader is advised to 'empty his cup', open his mind, and allow for the somewhat esoteric concepts and metaphors needed to attempt to impart how a mystical experience is experienced.

Unity

Phanke and Richards regard 'unity' as the foremost hallmark of mystical experiences (1966). In essence, the experience of unity entails a view of everything in the universe being connected and interrelated. Instead of perceiving a multiplicity of objects, one experiences an underlying unity in all things. This unity is also extended to the self and consciousness, leading to self-transcendence: The dissolving of the sense of being something separate from the rest of the universe, a 'self' or 'ego' (Levenson, Jennings, Aldwin, & Shiraishi, 2005). Some will describe the process to self-transcendence as though it feels like they are dying (Fadiman, 2011). However, it is only the ego that dies whilst the consciousness of the experiencer persist, and he or she is left with what some has called 'pure awareness' or 'pure

consciousness'(Shear & Jevning, 1999): An awareness which does not identify with any specific object, but is the awareness in which sounds, sights, thoughts, feelings, sensations, etc. are experienced moment by moment. Unity can be arrived at internally, involving that the sense of individuality or ego fades away, or it can be arrived at externally, through the sense of an underlying oneness between the subject and objects (Pahnke, 1963).

Inherent to the experience of unity is, in essence, a monistic view of reality: the transcendence of the Cartesian duality of mind and matter, and the merging of subject and object. A quantum physicist may be more capable of judging the scientific coherency of monism, but it appears that the way in which human beings experience reality as consisting of independent and separate matter/energy is a characteristic of cognition, not of reality. Or, as written by astronomer and astrophysicist Carl Sagan:

"*If you wish to make apple pie from scratch, you must first invent the universe."* (Sagan, 1980 p. 218)

Although science appears to inform us that everything is connected and interrelated, even consciousness, we rarely ever *feel* so. Instead we feel as something separated from the rest, a body of blood and guts enclosed in a thin layer of skin, roaming around in a universe that is different from us. We feel *inside* the universe, and not *of* the universe. In essence, the experience of unity can be said to be the dissolving of inner and outer; all merges into one, and the individual identifies with the whole of it instead of his skin-encapsulated ego.

A facet of this experiential category is an insight into the interrelatedness of all living beings: The experiencer will often feel that essentially all living things can and should be regarded as our brothers and sisters. From the perspective of mystical experiences, the universe which you *are* is the one that is alive in each and every living being. We come from the same source, and in this unifying perspective we essentially *are* the same.

Transcendence of time and space

Normally we might feel like we are living 'in' time, with time being something linear that ever moves forward, that can be broken down in smaller and smaller pieces, and the existence of past, present and future. This is probably an adaptive view for the organism, for it enables us to plan ahead and so forth, but it is not necessarily true. Perhaps it is more accurate to say that we are 'of' time, much in the same way as we are 'of' the universe. And to consciousness there really is no past or future, only the present. With mystical experiences comes an intuitive understanding and feeling that one can only exist in the 'now', in this present

moment. One can for instance only take one step or say one word, and it is 'this one'. The experiencer feels as though there is only one time and place he or she can be, and that is 'here and now'. This is obviously true, but may seem trite. But when dwelling deeply in the present moment, the experiencer realizes for instance how much of his mental capabilities are usually spent ruminating on the past, worrying about the future, or otherwise not 'being present' with reality in this moment. It can appear like our minds usually are split between remembering, predicting, imagining, and so on, leaving very little 'here'. The experiencer perceives the present moment as something beyond ordinary three-dimensional space, in a space of eternity or infinity (Pahnke, 1969). In this 'eternal present', he or she feels as though there is really no coming or going, no cause and effect, beginning or end, birth or death, etc., only whatever 'is' in this moment. Whatever 'is', is what the Zen Buddhists call the 'suchness' of reality (Hạnh, 1974). This suchness is experienced as eternal and indestructible.

Intuitive knowledge

This category consists of two interrelated elements: Firstly, the insight or illumination about being or existence in general, felt at an intuitive, non-rational level, and gained by direct experience (Pahnke & Richards, 1966). Secondly, the experiencer feels with absolute conviction and certainty that the experience is ultimately *real*, not a subjective delusion (Pahnke & Richards, 1966). To the experiencer, reality as perceived in mystical experiences is *more* real than that of normal waking consciousness. These two elements are connected, because the knowledge given to the experiencer directly through participation in 'ultimate reality' carries its own sense of certainty. William James named this the 'noetic quality', writing that mystical states;

"…seem to those who experience them to be also states of knowledge. They are states of insight into depths of truth unplumbed by the discursive intellect." (James, 1905, p. 300).

James point towards the dissolving of conceptualizations that leads to the encounter with ultimate reality: The experiencer feels as though normal waking consciousness is far too much assimilation and too little accommodation, that one normally relies so much on previous experience and already defined categories and concepts that it takes away from perceiving reality as it is. When achieved through psychedelics, the experiencer might expresses that it does not feel like a drug-experience per se, but more aptly like 'waking up' (Harris, 2014).

Sacredness or awesomeness

Parallel to the apparent unveiling of reality is a great sense of awe and wonder at its magnificence. It is expressed as coming into contact with that which is beyond all things, something at a deeper level than any religious or philosophical concepts (Pahnke & Richards, 1966). Depending on one's religious, spiritual or secular orientation, one may describe it as a direct encounter with God, Existence, Buddha-nature, the Ground of Being, the Void, the Tao, etc. The esoteric concept of a third eye has perhaps some metaphorical value in the sense that the sudden perceiving of this might strike one as if one has been equipped with a new sensory modality specifically designed for this purpose. The experiencer is usually awestruck and unshakably convinced that consciousness' includes infinitely more than his or hers individual ego as it is normally experienced (Richards, 2009).

Deeply felt positive mood

Although mystical experiences might sound psychologically challenging to some, it is usually characterized by a deeply felt positive mood. The experiencer often feels joy, bliss, blessedness, peace and love to an overwhelming intensity, often leading to tears (Pahnke & Richards, 1966). Pahnke (1963) writes that the intensity is such that it can be regarded as the highest levels of human experience of these emotions, and that they are highly valued by the experiencer.

Ineffability and paradoxicality

The experiencer expresses that the experience cannot be translated into words, as said by philosopher Gerald Heard:

"You can only say it isn't, it isn't, it isn't… trying to tell people what it is." (Heard, 1956, 6:34)

As it is said in Zen, words can only point to the moon, you have to *see it* for yourself (Hạnh, 1974). In this regard, all descriptions of mystical experiences are about the pointing hand, not the moon.

Paradoxicality refers to logical contradictions becoming apparent when strictly analyzed. The experiencer will often express aspects of the experience which violates the laws of Aristotelian logic (Pahnke & Richards, 1966). Dichotomies are transcended such that the experiencer might identify as both living and dead or being and non-being. This reflects what the Taoist call 'yin and yang': The experiencer sees himself and the universe as a whole, consisting of polarities which essentially are one, like the crust and through of a wave: i.e.

up/down, suffering/happiness, space/solids, self/other, being/non-being, and so on (Watts & Huang, 1975).

Research on mystical experiences

Very little experimental research has been conducted on mystical experiences, but five studies stand out: The first is Phanke's famous 'Good-Friday experiment' from 1962, in which divinity students received either psilocybin or an active placebo while taking part in the Good-Friday service in a Boston University chapel (Pahnke, 1963), and Doblin's 25-year follow up (Doblin, 1991). The other three are all recent studies conducted at Johns Hopkins University. The first was conducted by Griffiths et al. in 2006, investigating the acute and long-term psychological effects of psilocybin, and a follow-up report was published two years later (Griffiths et al., 2008). In continuation of this inquiry, Griffiths et al. published a study on psilocybin's immediate and persisting dose-related effects (2011). Lastly, Maclean, Johnson and Griffiths published a study on the long term impact on personality among participants in the two aforementioned studies (2011). In the following these studies are reviewed in short and their results presented.

The Good Friday experiment

Pahnke (1963) designed this study for the purpose of examining psilocybin's potential to facilitate mystical experiences among religiously oriented participants in a religious setting. The study was conducted in a chapel on Good Friday in 1962, where the participants received a live broadcast of the Good Friday sermon. Pahnke drew inspiration from the traditional religious use of psilocybin among indigenous tribes, and hypothesized that the religious setting would facilitate religious feelings (Pahnke, 1963). Methodologically, the study was a randomized controlled, matched group, double-blinded experiment with active placebo. Prior to the experiment, twenty male protestant volunteers had been screened for physical, psychological and religious variables, and matched into ten sets of closely matched pairs. On the day of the experiment, they were randomly assigned to receive psilocybin (30 mg) or an active placebo (200 mg nicotinic acid). The subjects were divided into five groups of four with two research assistants per group as group leaders (Pahnke, 1963). The purpose of the group leaders were to aid in creating a friendly and trust-filled environment, lending the participants reassurance and confidence. Among the group leaders, one in each pair was randomly assigned half a dose of psilocybin (Pahnke, 1963).

Based on content-analysis of the participant's written and oral account of their

experience, and questionnaires administered both shortly after the experiment and after six months, the subject's experiences were made quantifiable, with a measure of degree of mystical experience fulfillment according to 9 experiential categories, corresponding to the six mentioned earlier (Pahnke, 1963). Phanke somewhat arbitrarily set the criteria for complete mystical experience at a 60-70 % score in each separate category. Accordingly, four of the ten experimental subjects had complete mystical experiences, and none of the control subjects did. Eight of the ten experimental subjects experienced at least seven of the nine categories, and none in the control group achieved a higher score than their matched partner in any category. In fact, the experimental subjects exceeded the control subjects to a significant degree in every general category and every specific question on the questionnaires.

25 years after the experiment, Doblin (1991) administered a follow-up enquiry, interviewing the subjects and administering the original questionnaires. His follow up included nine subjects from the control group and seven from the experimental group. The average scores in the experiential categories had changed remarkably little for either group. It appears that the passage of time did not change their opinions about their experience, and the experimental group still scored significantly higher than the controls in every category. The experimental group also reported a relatively high degree of persisting positive changes related to the experience, while virtually no such changes were reported by the control group. In the open-ended portion of the questionnaire, the experimental group expressed that, Doblin writes:

"*…the experience helped them to resolve career decisions, recognize the arbitrariness of ego boundaries, increase their depth of faith, increase their appreciation of eternal life, deepen their sense of the meaning of Christ, and heighten their sense of joy and beauty."* (Doblin, 1991, p. 12).

Even though the generalizability of this study is severely limited[3], these results support Phanke's hypotheses that 1. psilocybin can induce mystical experiences for religious people in religious settings, and 2. such experiences can lead to persisting positive effects.

The studies at Johns Hopkins University

The studies conducted at Johns Hopkins University are remarkable because they investigate the same phenomena as Phanke's study, only with substantially improved research design and implementing the same sort of procedures that are recommended for psychedelic therapy.

[3] A thorough critique of the Good Friday experiment can be found in Doblin (1991).

Griffiths et al.'s (2006) objective was to examine the acute and long-term psychological effects of high-dose psilocybin compared to an active placebo under comfortable and supportive circumstances. They recruited 36 volunteer participants which were characterized by being hallucinogen-naïve, well-educated, screened for family history of serious psychiatric illness, and reporting at least intermittent spiritual or religious involvement. They received either psilocybin (30 mg/70 kg) or methylphenidatehydrocloride (40 mg/70 kg) using a double-blind between group, crossover design, involving two or three 8-hour drug sessions, conducted at two-month intervals. The participants were randomly assigned to receive either two (N=30) or three sessions (N=6). The group of thirty was randomly assigned psilocybin at one of the two sessions, while the six remaining subjects received the active placebo in the two first sessions and psilocybin in the third, with the purpose of obscuring the study design for participants and monitors. The data for these six were not included in the analysis, but generally did not deviate from the rest. Outcome measures where obtained throughout the drug sessions, including physiological measures and observer ratings of mood and behavior. At 7-hours after drug ingestion (when the primary effects had worn off), the participants completed several questionnaires, including measures of mystical experience based on Stace's conceptualization[4]. The longitudinal measures assessed before and 2 months after each drug session included measures of psychiatric symptoms, personality measures, quality of life, and lifetime mystical experiences.

All sessions were individual, and in order to build trust and rapport, each participant met with the primary monitor for a total of 8 hours before the first session, and 4 hours after each session. In these meetings the participant's life history and current circumstances were reviewed.

Among the most interesting results, they found that according to a priori criteria, 22 of the 36 (61 %) had a complete mystical experience under the psilocybin condition, compared to 4 (11 %) in the control condition. The experimental group scored significantly higher than the control group on all measures of mystical experience. From measures administered after 2 months, they found that 33 % rated the experience as the single most spiritually significant experience in their lives, and an additional 38 % (71 % total) as among the top five most spiritually significant experiences, in contrast to 0 and 8 %, respectively, in the control condition. When asked how personally meaningful the experience was, 67 % of the participants rated the psilocybin experience as the single most (12 %), or among the top five

[4] *States of Counsciousness Questionnaire, which includes 43 items from The Phanke-Richards Mystical Experience Questionnaire* (Pahnke, 1969), and the *The Mystisism Scale* (Hood, 1975)

most (55 %) meaningful experiences of their lives, compared to, respectively, 0 and 10 % in the control condition. In writing, some of the participants equated the meaningfulness of the experience with that of the birth of a first child. Seventy-nine percent (79 %) indicated that the psilocybin experience increased their current sense of personal well-being or satisfaction with life 'moderately' (50 %) or 'very much' (29 %), in contrast to 17 % and 4 % in the control condition. No participants rated either condition to have decreased their sense of well-being or life satisfaction. With respects to adverse events, 11 (31 %) participants indicated that that they experienced strong or extreme fear at some point during the psilocybin session. Among these, 8 (22 %) had sessions dominated by anxiety or uncomfortable psychological struggle, and 6 (17 %) had mild transient ideas of reference/paranoia sometime during the session. These reactions where readily managed with reassurance, did not require pharmacological intervention and did not persist beyond the session. Three patients indicated they would never wish to repeat an experience like that again. However, most of these participants rated the experience as spiritually and personally meaningful, and none rated it as having decreased their sense of well-being or life satisfaction. Community observer ratings from friends and family indicated that the psilocybin sessions were associated with small but significant positive changes in the participant's behavior and attitude.

The follow-up report ranging 14 to 16 months after the psilocybin treatment found that the participant ratings and report of persisting beneficial effects had not changed significantly, suggesting lasting effects. The participant's ratings of personal and spiritual meaning were highly correlated with measures of mystical experience at 7 hours after psilocybin ingestion. Controlling for three measures of experience-intensity, the resulting correlations for the Mysticism-scale and personal meaningfulness were 0.65, 0.61 and 0.61, and correlations for spiritual significance 0.77, 0.78 and 0.74. Observer ratings of overall drug-effect, anxiety/fearfulness, peace/joy and distance from reality were not significantly correlated with measures of meaningfulness. Measures of personal and spiritual meaning, as well as increased life-satisfaction, was not significantly diminished after 14-months compared with 2 months post psilocybin-session. Although this study has limited generalizability due to homogeneous nature of the participants, it demonstrates interesting effects. In accordance with the proposed importance of mystical experiences for the beneficial effects from psychedelic therapy, correlation and regression analysis suggested that the incidence of mystical experience contributed significantly to the sustained high ratings of personal and spiritual significance.

In 2011 Griffiths et al. published a study using similar procedures to investigate the dose related effects of psilocybin (0, 5, 10, 20, 30 mg/70 kg), in ascending or descending

order among 18 volunteers screened in the same manner as in the previous study. Various measures where conducted at 7-hours, 1 month and 14 months after psilocybin administration. Seventy-two percent (72 %) fulfilled criteria for having a mystical experience at either or both of the two highest dose sessions. One month after either session, 83 % rated the experience as the single most or among top 5 most spiritually significant experiences of their life. At 14 months this percentage had risen to 94 %. The participants reported persisting positive changes in attitudes, mood, life-satisfaction, behavior and altruism/social effects, all of which were dose-related and significant after 14-months for the two highest dosage conditions. The types of behavioral change most frequently cited were better social relationships, increased physical and psychological self-care and increased spiritual practice. Griffiths et al. (2011) also found indications that an ascending sequence of psilocybin dosages where related to larger beneficial effects from the highest dosages than a descending sequence. Furthermore, the study informs the likelihood of adverse reactions at different dosages: 39 % of the participants reported extreme fear, fear of insanity or fear of feeling trapped, sometime during the sessions, and all of these belonged to the two highest dosage conditions (1 at 20 mg/70 kg, 6 at 30 mg/70 kg). These negative effects were well managed with reassurance. Most noteworthy, experiencing anxiety generally did not affect the rates of having complete mystical experiences, possibly because the negative feelings commonly were short lived. The increase of adverse effects must be considered in relation to potential positive effects. The proportion of participants who had complete mystical experiences, which likely mediate persisting positive effects, was generally an increasing function of dose; endorsement of having had a complete mystical experience, or the most spiritually significant experience of their life, increased 25 % and 60 %, respectively, from 20 to 30 mg/70 kg. Likewise, endorsement of moderate to extreme positive behavioral change increased 45 % from 20 to 30 mg/kg.

In 2011, MacLean, Johnson and Griffiths published a report on changes in personality traits, as measured by the NEO-Personality Inventory, among research participants having had psilocybin sessions. This report included participants from both the previously mentioned studies. They found that the NEO-PI measure of *Openness* increased significantly from screening to post-test, while there were no significant changes in the other personality traits. Furthermore, the changes in Openness were significantly correlated with different measures of mystical experience (r values from 0.33 to 0.44, $p<0.01$). Importantly, measures of mystical experience did not correlated significantly with screening levels of Openness ($r=0.12$, $p=0,41$) or its facets. Comparing the participants who fulfilled the criteria for

complete mystical experience (N=30) with those who did not (N=22), found that the mystical experience group had significant increases in openness while the other group did not. Follow-up measures were conducted more than 1 year after the high-dose session (M=16 months). In participants who had mystical experiences, Openness levels had decreased slightly from post-test, but did not differ significantly from 2 month post psilocybin levels, and remained significantly higher than screening levels. In contrast, participants who did not have mystical experiences remained nearly identical in levels of Openness from screening to post-test and follow-up. This study indicate that mystical experiences, as induced by high-dose psilocybin in screened adults under supportive circumstances, can induce changes in Openness larger than changes in personality traits typically observed in adults over decades of life experiences (Terracciano, McCrae, Brant, & Costa, 2005).

In summary, the research conducted at Johns Hopkins University clearly demonstrates that psilocybin can induce mystical experiences, and that these are significantly related to having persistent beneficial effects in the domains of attitude, behavior and personality. The incidence of mystical experiences appears to be dosage-related, with dosages ≥20 mg/70 kg having greater chance at eliciting mystical experiences. The incidence of adverse reactions, mainly fear and anxiety, also appears to be dose related, but in these studies all such reactions where readily managed with reassurance and no participant rated the experience as having diminished their sense of quality of life or life-satisfaction. Adverse effects did not diminish the rates of mystical experiences. These results provide further support for the assumption that the observed beneficial effects of administering classical psychedelics in a controlled manner, at least in part is mediated by the occurrence of mystical experiences. However, the generalizability of these findings is limited by the homogenous nature of the participants, and encourages replication with more representative participants.

Attitude, life-philosophy, values and strategy of existence

In preparatory sessions before psychedelic therapy, exploring the patients' philosophical orientation and religious beliefs is emphasized (Grof, 1980). Subsequent positive changes in behavior and attitude, often reflecting changes in life-philosophy, hierarchy of values, and strategy of existence, can be regarded an expression of successful therapy (Griffiths et al., 2008; Griffiths et al., 2011; Griffiths et al., 2006). Occasionally, the therapist will even offer the patient direct advice and guidance on such issues during preparatory sessions. This advice is usually based on insights commonly observed among patients with successful treatments, involving for instance how to draw satisfaction from the simple and available things in life

(Grof, 1980). There are limited empirical data on changes in these domains specifically, except the aforementioned personality changes (MacLean et al., 2011) and measured changes in attitude on questionnaire scales involving attitudes about life and/or self and altruism described in Griffiths et al. (2008). However, this may be an interesting field for future study, perhaps one that can aid the understanding of how this therapy can lead to lasting therapeutic changes. To elaborate on the *types* of changes related to therapy involving large doses of psychedelics, let us look at the work of Stan Grof. Although lacking empirical data, his qualitative descriptions of the type of long term transformations observed among individuals having undergone thorough psychedelic-augmented therapy can possibly shed light on the character and nature of these changes.

Grof is undoubtedly one of the most experienced psychedelic therapists, and has written extensively on types of transformations he has observed in his patients. He writes:

"On occasion, one LSD experience has drastically changed an individual's world view… It has mediated a profound spiritual opening in atheists, skeptics and materialistically oriented scientists, facilitating far-reaching emotional liberation, and caused radical changes in value systems and basic life style." (p. 239, 1980).

It should be noted that Grof does not adhere strictly to the psychedelic therapy approach, but combines elements from psycholytic, psychedelic and psychoanalytic therapy in his own transpersonal-oriented approach. He describes a process whereby many of his patients, after having been confronted with the extremes of human experience, often involving a symbolic death and rebirth process, become aware of having lived their lives inauthentically on account of strong unconscious death anxiety (Grof, 1980). Patients gain insight in having lived their life in a manner characterized by a chronic sense of dissatisfaction, inadequacy, exaggerated ambitions and competitive tendencies, feelings of pressure and lack of time; a sort of 'rat-race' type of existence (Grof, 1980). Grof (1980) argues that when a 'psychedelic transformation' occur, patients shift into a more relaxed and harmonious approach to life characterized by various changes. They develop more reverence for life in all its manifestations and derive more pleasure from the simple and available things. Immersing oneself in the stream of life is prioritized rather than aiming at achieving any specific goal. Feelings of separation and alienation are replaced by a sense of belonging and being a part of the life process. There is a shift from selfishness and competitiveness to altruism and cooperation. As materialistic values are rejected, one's ecological awareness is increased, and one's ethics often appropriate a more transcendental character, entailing an increased sense of

compassion, tolerance and justice (Grof, 1980). Grof concludes that a successful psychedelic transformation can result in a more joyful, interesting and satisfactory way of being, with a natural sense of meaning and belonging.

Another striking aspect of such transformations Grof (1980) describes is developing intense interest in consciousness, self-exploration and spirituality. There is often an increased inclination towards mysticism, oriental philosophy, religious symbolism and spiritual practices.

With regards to changes in philosophical orientation, Grof (1980) argues that the assumptions inherent to the Newtonian-Cartesian world-view gradually become untenable. These involve that the world is seen as objectively real and material, space as three-dimensional, time linear, and causality accepted as the ruling principle governing events. Although the individual still thinks in terms of matter, causality and linear time, there is a gradual integration of a more transcendental world view and a philosophical understanding of existence that approaches that of for instance Taoism, variants of Buddhism or modern physics. This involves that one's understanding of the universe changes from that of a gigantic assembly of material objects, to that of, as Grof puts it: *"an infinite system of adventures in counsciousness"* (Grof, 1980).

A further change brought about by psychedelic transformations, Grof (1980) argues, is that the share intensity and magnitude of these psychedelic experiences are so staggering that they raise the basic tolerance for difficult events. Furthermore, in our everyday mode of existence, the emphasis is often to try to eliminate difficult experiences and create a sort of utopian world free of problems. He argues that through transcendental experiences, this deluded approach can shift towards one of 'transcendental realism'; seeing the good and bad sides of life as intrinsic and inseparable components (Grof, 1980). What formerly might have been regarded as purely negative experiences can be seen from other perspectives, exchanging aversion from negative emotions with acceptance or even intrigue and interest.

Part 3: Existential psychology

There is as yet no 'grand theory' of psychology, so one might ask: What theoretical approach is best suited to try to understand the psychological effects of mystical experiences? And how are we to fit these phenomena into the body of existing psychological knowledge? I regard different psychological theories as different languages intended for attempting to describe what goes on in reality. While languages are mostly overlapping, describing the same phenomena with different labels, there are also languages that are more capable at capturing certain phenomena than others. For instance, the Norwegian word 'forelsket', which captures the euphoria you feel when you fall in love, has no counterpart in English. Equally I believe there are some psychological theories more adept at capturing certain psychological phenomena than others. When it comes to mystical experiences, they appear to have a very existential character: They revolve around ontological questions, and themes like death, being, separateness and meaning. I propose therefore that existential psychology may serve as a fruitful approach for the purpose of examining their function on human psychology.

In the following I will first explain what existential psychology is and how it explains psychopathology. I will not attempt to describe how existential psychotherapy is conducted, only the model on which it is based. Then I will attempt to view mystical experiences from an existential psychological perspective.

Existential psychology

Existential psychology sprang forth from the humanistic revolution of the second half of the 20th century (Yalom, 1980). It is an approach to understanding the human psyche rooted in existential philosophy. Represented by philosophers such as Kierkegaard, Heidegger and Sartre, existential philosophy grapples with questions about the essential nature and meaning of human existence (Walsh & McElwain, 2002). Existentialists do not always agree on exactly what these questions are, but they often include themes like being, choice, freedom, responsibility, death, meaning, isolation and absurdity (Yalom, 1980). Existentialism can perhaps most accurately be regarded as an orientation or a perspective: It's about keeping in mind the bigger picture, the existential conditions inherent to existence.

Among the most influential contemporary existential psychologists is Irvin D. Yalom. He presents a comprehensive theory of existential psychology in his *Existential Psychotherapy* (1980), and I will use this as the basic framework of existential psychology for the purpose of this thesis. Yalom defines existential psychotherapy as *"…a dynamic approach to therapy which focuses on concerns that are rooted in the individuals existence."* (1980, p.

5). The model is dynamical in the sense that it presumes that human behavior, thought and emotion, are the results of conflicting forces existing at varying levels of awareness, some being entirely unconscious (Yalom, 1980). It proposes that human psychopathology can be understood in terms of inadequate means of dealing with fundamental existential conditions: Conscious or unconscious awareness of 'ultimate concerns' leads to anxiety, which activates defense mechanisms. Psychopathology arises when the defense mechanisms are inept at dealing with the anxiety. Yalom (1980) operates with four such ultimate existential concerns: Death, isolation, freedom and meaninglessness. These are ultimate in the sense of being 'givens' of existence that are unchangeable and always influencing human lives.

While anxiety generally is seen as a symptom to be reduced or eliminated, existentialists view existential anxiety and guilt as normal and unavoidable products of being confronted with the conditions of existence (Walsh & McElwain, 2002). Furthermore, Yalom (1980) argues that our existential anxiety and guilt can be instructive as to how to live more *authentically*. From an existential psychological viewpoint, inauthenticity goes hand in hand with psychopathology (Walsh & McElwain, 2002). But what does authenticity imply?

Authenticity is about knowing oneself, being in touch with one's sense of identity and living in accordance with the properties of this sense of self; it's values, ideas and ethics (Kierkegaard, 2006). According to Heidegger, this existential sense of self is fluid and transcends day-to-day behavior or thoughts about self: It is one's nature or essence, but changing from moment to moment, and as a result, a person can only be authentic on a moment to moment basis (Heidegger, 1962). Sartre writes on authenticity, in the context of freedom, that it is about becoming who you truly want to be, asserting one's will when faced with opportunities to choose one's possibilities (Sartre, 1992). He often portrays authenticity through the *inauthenticity* of the characters in his novels: They are people who base their actions on external pressures, ignoring their inner drives and morals in order to have more comfortable relations to external agents (Yalom, 1980). In this context, authenticity has been said to be about overcoming conformity and conditioning to interpreting the world through one's own experience (Heidegger, 1962). Authenticity can be said to involve a radical openness and willingness to confront the givens of existence toward the goal of living in conscious harmony with them (Walsh & McElwain, 2002). I interpret these philosophers as to that authenticity is about knowing oneself, one's essence, and that means facing reality as it is, free from self-deceptive views. I would further say that an authentic mode of being stands as the optimal moment-to-moment response to existential conflicts: it involves facing death and choosing life, facing meaninglessness and creating meaning, facing isolation and relating

to others authentically, and facing freedom and assuming responsibility.

Heidegger uses a useful concept to elaborate on authenticity. He writes that there are two states of being: a state of forgetfulness of being and a state of mindfulness of being. In the state of forgetfulness, corresponding to an inauthentic existence, one lives in the world of things and is absorbed in the everyday diversions of life, forgetting the bigger picture (Heidegger, 1962). One is lost in the 'they', absorbed in idle chatter, concerned with the *way* in which things are. One does not recognize one's authorship of life and the world, and feels instead fleeing and falling, *"carried along by the nobody"* (Heidegger, 1962, p. 312). In contrast, in the state of mindfulness of being, also called 'the ontological mode', one exists authentically, being fully self-aware – aware of oneself both as a transcendent (constituting) ego as well as the empirical (constituted) ego (Yalom, 1980). One embraces one's possibilities and limits, faces absolute freedom and nothingness – and is anxious in the face of them (Heidegger, 1962; Yalom, 1980). In this state one is mindful and marvels not at the way things are, but *that* they are. It is a state of continually being aware of *being*. In this ontological mode, Yalom (1980) argues, lies the power to change oneself.

Yalom's theory proposes that we ordinarily live in the state of forgetfulness of being, that it constitutes our everyday mode of existence. But, as Heidegger argues, there are certain 'urgent' experiences that can jolt one from the state of forgetfulness of being to that of mindfulness (Heidegger, 1962). Yalom (1980) argues that death awareness is the unrivaled urgent experience, and writes that the idea of death can serve as a catalyst to plunge us into a more authentic mode of existence. He cites research that confirms this possibility. For instance, in a study of people who had experienced near-death events (NDEs), Noyes (1980) found that 23 percent described, that even years later, the experience had caused a rearrangement of values and priorities in life. They describe that after the event they had a renewed sense of the preciousness of life, an increased ability to live in the moment and savour each one as they pass, an urge to enjoy life before it is too late, etc. In his research on NDE, Noyes identified three stages in the process of dying, the third, notably, being analogous to mystical experiences as occasioned by psychedelic therapy (Noyes, 1972).

Yalom (1980) argues that what distinguishes those who grow from death awareness or other forms of urgent experiences from those who do not, is the extent to which one's circumstance and capability allow for assimilation of the confrontation. One's personal and social resources have been found to be predicative of who manages to grow in the aftermath of crisis (Tedeschi, Park, & Calhoun, 1998), and this can probably be extended to this type of urgent events.

Death

Yalom regards death as a primordial source of anxiety (Yalom, 1980). It is one of life's most self-evident truths that nothing lasts. As we are born we are in one sense already dying. The core of death anxiety lies in the fear of 'ceasing to be' (Yalom, 1980), becoming nothing and loosing oneself (Kierkegaard, 1944). Yalom presents death anxiety as an anxiety with no object in reality. Therefore it is rarely manifested in its pure form, but more often is hidden under layers of defenses such as displacement and sublimation (Yalom, 1980).

Yalom describes how we as children gradually confront the idea of death and build defenses against it (Yalom, 1980). If the child's environment is attentive to its needs, it instills the child with an illusory belief that the world is ultimately a safe place. As this illusion is confronted with reality, it is a major developmental task to deal with death anxiety through development of defense mechanisms. Yalom emphasizes two primary defenses: 1. 'Specialness', the belief that although everyone must die, this is somehow not true for 'me', that one does not belong to 'everyone'. 2. 'Ultimate rescuer', the belief that ultimately there is someone or something keeping you safe from death. These defenses persist in adulthood, although both the nature of death anxiety and these primary defenses are often obscured by secondary defenses and anxieties (Yalom, 1980). Yalom (1980) argues that most people develop adaptive denial-based defenses such as suppression, displacement or socially sanctioned religious beliefs that 'detoxify' death, or achieve a sort of symbolic immortality by various personal efforts. One notable example of achieving a symbolic immortality is losing oneself in the experiential transcendent mode:

"…a state so intense that time and death disappear and one lives in the 'continuous present'." (1980, p. 42)

Psychopathology can arise from extraordinary stress, inadequate defenses, or the combination of both, leading to heightened dysphoria and/or erecting secondary defenses which themselves can constrict growth and in some cases cause secondary anxiety. This takes place on a continuum from severely neurotic to normal, but Yalom warns that even those who rather effectively hold the terror at bay can be prevented growth and constricted to an unsatisfying life. In citing Otto Rank, he writes that the neurotic is one "*who refused the loan (life) in order to avoid the payment of debt (death).*" (1980, p. 111).

Yet Yalom does not merely see death as a source of anxiety, but emphasizes time and again that confronting it is what makes it possible to live in an authentic matter: "*Although the physicality of death destroys the man, the idea of death saves him* (1980, p. 30)".

Freedom and responsibility

The philosophical debate on freedom, causality, determinism and free will, has been going on for millennia. Yalom appears to present a view of a relative freedom: That every human being has freedom to choose, but only within its context; a context which one is not wholly free to choose, but is free to influence. The context of tomorrow can to some extent be shaped by the choices of today (Walsh & McElwain, 2002). The existential conflict inherent to freedom is that of responsibility. The freedom to choose ultimately entails responsibility for:

"…creating one's own self, destiny, life predicament, feelings and, if that be the case, one's own suffering." (Yalom, 1980, p. 218)

From an existential perspective, the world acquires its significance through the way it is constituted by the human being. To illustrate, consider this passage from Sartre's novel *Nausea:*

"…And then all of a sudden, there it was, clear as day: existence had suddenly unveiled itself. It had lost the harmless look of an abstract category: it was the very paste of things, the root was kneaded into existence. Or rather, the root, the park gates, the bench, the sparse grass, all of that had vanished: the diversity of things, the individuality, were only an appearance, a veneer." (Yalom, 1980, p. 219-20)

Confronting the 'the very paste of things', the protagonist sees that it has no form or meaning before he supplies it, and in this manner he is confronted with his constituting responsibility (Yalom, 1980). In one sense the individual is a part of reality, in another sense it constitutes what *is* there. Ultimately, freedom entails responsibility for one's life, for ones actions and failures to act (Yalom, 1980).

To fully appreciate the responsibility of being the creator of one's world can be a deeply frightening insight (Yalom, 1980). Its implication is that nothing in the world has significance except by one's own creation: faced with cosmic indifference and meaninglessness, the individual alone is the creator (Yalom, 1980). To experience existence as thus can feel as though the ground drops beneath one's feet. 'Groundlessness' if often used to describe the subjective experience of responsibility awareness. But in contrast to death anxiety, the anxiety of groundlessness is not evident in everyday experience. The mere appearance of reality hides it (Yalom, 1980). Reality as we ordinarily experience it tells us that the world is 'there' and that we enter and leave it. The appearances of the world serve our denial:

"we constitute the world in such a way that it appears independent of our constitution." (Yalom, 1980, p. 222)

In order to live authentically we must assume responsibility (Yalom, 1980). But with assuming responsibility comes a broadening of accountability, one which potentially evokes existential guilt. As distinct from an ordinary sense of guilt, existential guilt is concerned with guilt stemming from transgressions against oneself, and ones innate potential to live authentically (Yalom, 1980). This guilt can be considered a positive force, pointing us towards authenticity (Yalom, 1980).

Existential isolation

Just as one can realize one's finitude, one can realize that we all are fundamentally alone. This fundamental aloneness of existence is what Yalom calls existential isolation (Yalom, 1980). To experience it is to experience one's separateness, separateness from other beings and from the world. However, our isolation usually remains hidden. The 'paste of things' is so saturated with personal and collective meaning that we feel as if surrounded by a stable world of familiar objects, giving the world an intuitive "at-homeness" (Yalom, 1980). Yalom writes:

"*The primordial world of vast emptiness and isolation is hidden under layers of seemingly worldly artifacts, only to be seen in brief burst during nightmares and mythic visions"* (1980, p. 358)

He calls the process whereby the curtain of reality momentarily opens 'defamiliarization": Meanings are torn from objects, symbols and concepts disintegrate, and the world loses its "at-homeness". In such moments, Yalom writes, one's relationship with the world is profoundly shaken, and one is "*confronted with the world's loneliness, mercilessness and nothingness."* (1980, p. 360). We find ourselves unwillingly and alone inserted into an existence we have not chosen (Yalom, 1980).

Growing up we gradually establish the boundaries of where the individual ends and others beings and the world begin. But the cost of this separateness is isolation. Human beings basic interpersonal task is to be at once 'a-part-of' and 'a-part-from' (Bugental, 1965). How we deal with this task is reflected in our interpersonal strategies, which Yalom argue are the most central means of dealing with existential isolation (1980).

Yalom (1980) writes that existential isolation produces a highly dissatisfying subjective state, which quickly is buried by unconscious defenses. The foremost defense towards existential isolation, he argues, is love, or what might more accurately be called

authentic love. Love cannot remove the fundamental isolation inherent to existence, but it can make the pain of isolation bearable (Yalom, 1980):

"A great relationship breaches the barriers of lofty solitude, subdues its strict law, and throws a bridge from self-being to self-being across the abyss of dread of the universe" (Buber, 1965, p. 175).

Yalom (1980) argues that facing reality squarely enables us to turn lovingly towards others, to relate to them with a full sense of the fact that they like ourselves are sentient beings, also alone, frightened and trying to carve out a world of "at-homeness" from the paste of things. If, on the other hand, one is "*overcome by the dread before the abyss of loneliness",* one will cling to them and use them as tools to serve one's isolation denial (1980, p. 363). When the individuals pure sense of being is to frightening in its isolation, one denies one's constituting responsibility and believes instead that one exists insofar as one is the object of someone else's consciousness (Yalom, 1980).

Meaninglessness

Why are we here? Why is the universe? What is the meaning of life? What do we live for and what shall we live by? If nothing lasts, what is the meaning of any of this?

Yalom (1980) writes that existence has an inherent dilemma. On one hand, there are from an existential viewpoint no absolutes: Human beings constitute themselves, their world, and their situation within that world. There is no 'meaning', grand design or guidelines for living other that what the individual creates. On the other hand, man is an ape that requires a sense of meaning, as living without it provokes considerable suffering (Yalom, 1980). The question is: How to find meaning in a universe which apparently has none?

One may not find an answer to the 'why' question, writes Yalom (1980), but one can probably find answers to the 'how' question. What is essential, he argues, is that human beings must recognize that it is their responsibility to create their own meaning in life and commit oneself to it, "*this requires that one be… 'half-sure and whole-hearted' – not an easy feat.*" (Yalom, 1980, p. 431). What is important is to discover something to *life for* and to *live by*. Yalom (1980) presents different meaning creating schemes which serves as examples of how to construct personal meaning in the absence of cosmic meaning. The foremost of these, he argues, is altruism: Leaving the world a better place, serving others and participating in charity. Then there is dedication to a cause, giving oneself to something bigger. What's central is to transcend the self and make it a part of a bigger scheme. Furthermore, Yalom

(1980) mentions creativity, stating that creation justifies itself. And there is also the perspective of living hedonistically, aiming at immersing oneself fully in life and deriving pleasure from it in the deepest sense. Reflected in several of these is that existence instills us with a basic striving for self-transcendence (Yalom 1980). Yalom writes:

"One begins with oneself in order to forget oneself and to immerse oneself into the world; one comprehends oneself in order not to be preoccupied with oneself." (Yalom, 1980, p. 439).

Transcending the self through for instance dedication to a cause can provide a sense of meaning, belonging, shared responsibility and continuation with regards to death. The existential conditions are conditions of the self, transcending the self can therefore to some extent be a means of transcending them.

Part 4: Existential psychology, mystical experiences and classical psychedelics

Discussion

Having examined mystical experiences and the existential psychological framework, it is not hard to appreciate their similarities with respect to ontological assumptions. Existentialists seek an understanding of human existence that precedes the splitting apart of subject and object (Walsh & McElwain, 2002). Mind and subjectivity are considered inseparable from the context in which they take place. The experience of unity, with self-transcendence and monism, gives an actual experience of such a deeper sense of reality. Furthermore, existentialists view time differently from the commonsense notion of linear time, but see both the present and the future as existing in a person's present experience (Walsh & McElwain, 2002). This bears resemblance to the transcendence of linear time as described in mystical experiences. What Heidegger calls a state of mindfulness of being, or the ontological mode, appears to coincide on several issues with mystical experiences, to the extent that I argue mystical experiences can be said to involve a state of mindfulness of being. This state is described as a continual awareness of being. It is a head on confrontation with reality in a deeper way than it is usually experienced. It is reality in the form of what Sartre calls "the very paste of things", or what is often described as ultimate reality or 'suchness' by Zen Buddhists. All of these terms point to the experience of undifferentiated existence. As expressed in existential psychology, mystical experiences appear to be a sort of urgent event, a *defamiliarizing* event. It might be interpreted as an experience of authenticity that jolts the individual out of one's normal "at-homeness" in the world, that forces him or her to accommodate to reality as it is experienced directly, correcting for the delusions and conditioning of the mind.

There are similarities between psychedelic experiences and what is called the infantile 'oceanic state' (Richards, 2009). Yalom describes infants as born in this oceanic state, which entails the sense of unity as described in mystical experiences, and that existential anxieties and the need to defend against them arise when the child develops a sense of separateness. Perhaps mystical experiences in some sense can be understood as a return to this pre-conceptual state of mind, or at least a resemblance of it. In this oceanic state one's experience is undifferentiated; there is simply awareness of being. This involves a sort of radical meta-perspective, stepping outside of one's normal identification with thoughts, feelings, and sensations, seeing them as just another part of the whole. The experiencer is thus faced with how much of his problems lie in his cognition and interpretations, not in reality. This is a

powerful insight, perhaps leading to a sense of empowerment that one 'is' not one's problems, thoughts and emotions.

While the courageous might deem such an experience worthwhile simply for the nature of the experience itself, psychedelic therapy attempts to be justified on the basis of lasting benefits. However, the experience itself does not last and exactly how it can be translated into lasting beneficial changes in largely unknown. It has been demonstrated that mystical experiences are related to positive changes in personality traits (MacLean et al., 2011), and with personality being something regarded as a stable predictor of mental health, this may be one probable candidate. Such changes can involve the sorts of changes of attitude, life style, strategy of existence, etc. that has been discussed previously. In order to fully explain how long term changes occurs one should probably consider the importance of factors relating to what happens before and after treatment, such as preparatory sessions and the post-treatment sessions which emphasize the integration of insights. But in this discussion and final part of my thesis I will restrict myself to discussing how lasting beneficial changes can be understood on account of Yalom's existential model. With regards to this model, psychopathology can be reduced by either increasing the adaptiveness of one's defenses or by reducing external stressors. In this context, let us view 'external' stressors as independent of the individuals' interpretation. Hence, the existential model posits that lasting changes are a consequence of changes in the adaptiveness of defenses towards existential conflicts. In existentialists' terms, this would involve increasing one's authenticity. To attempt to understand this better, let us have a look at what implications a mystical experience has with regards to the different existential conditions which I have described earlier in this thesis.

Death

Why should I fear death? If I am, then death is not. If Death is, then I am not. Why should I fear that which can only exist when I do not? (Epicurus)

Through mystical experiences it is possible to have insight into that death ultimately is a concept, an idea. As Epicurus said, death is not an experience, and although it may be natural for a self-conscious ape like man to fear death, it can be argued that death anxiety is irrational. As Yalom writes, it is a fear with no object in reality. Furthermore, with self-transcendence and subsequent identification with the 'source of being', there is no longer a self which can die. Death anxiety must belong to 'someone'. Identifying not with a person or a body, but with 'life' or 'being', entails that the idea of death no longer applies. One's fundamental understanding of death can therefore be radically changed, and perhaps leave the individual

confident that although frightening in our everyday mode of existence, ultimately there is really no reason to fear death. If this is so, it appears that the state of being inherent to mystical experiences releases the individual from this existential condition belonging to the self of normal waking consciousness. This can be considered a defense in the form of self-transcendence. And although the veils of reality recur after the experience, the noetic sense remains, meaning that the insights of the experience still feel true.

Another obvious effect of mystical experiences on death anxiety is caused by the firm and absolute stance in the present moment. Death is always something belonging to the future, all the way until it happens. Yalom describes this as to lose oneself in the experiential transcendent mode, and considers it a defense in the form of creating a symbolic immortality. The existential sense of self is defined as fluid, it exists only on a moment to moment basis. As Yalom (1980) puts it, it is 'empty'. If the concept of birth and death should apply to this sense of self, it is in the manner of a continuous process: One is always being born and one is always dying. Fundamentally speaking, you are not the same as you were just a moment ago. However, calling the continuous process of life a moment-to-moment death and re-birth process only points to the inadequacy of these terms. Longevity or 'eternal life' are concepts which apply to linear time, but the existentialist view of time is not linear, nor is the view of mystical experiences. In the 'eternal present', the self can be said to be eternal on account of its absolute presentness. The concept of birth and death simply does not apply to this existential moment-to-moment sense of self or to the transcendental being one identifies with while having mystical experiences. In this sense one can say that death and birth belongs to the state of forgetfulness of being, while the state of mindfulness of being brought about by mystical experiences creates a sort of symbolic immortality that is experienced as ultimately true.

Yalom (1980) suggests that encounters that increase our death awareness, such as NDE's, can lead to changes in values and priorities in life. Mystical experiences are also associated with changes in values and attitudes, and anecdotal evidence points to some shared characteristics of the changes in values associated with NDE's and mystical experiences; such as deriving pleasure from the simple things, living in the present moment, appreciating life more fully, and so on. This suggests that the types of changes in attitude, life-philosophy and values, could result from mystical experiences resembling or constituting a form of 'urgent' event, such as NDEs. It is common knowledge among psychedelic connoisseurs that prior to self-transcendence the experiencer may feel as though he or she is dying, and that this can be particularly frightening. It is sometimes called 'ego-death'. Perhaps mystical experiences can

be construed as a means of having a form of NDE, without requiring any real immediate threat.

Freedom

Existential psychology argues that we in our everyday mode of existence are unaware of our constituting responsibility; instead we may feel as carried along by the nobody, disempowered and helpless at worst. If mystical experiences indeed entail a state of mindfulness of being, insight into reality's inherent freedom and responsibility for constituting one's life should become more available. In this manner it is suggested that it constitutes an urgent event where one's constitutional power becomes apparent, facilitating the assumption of responsibility. Previous inauthenticity and lack of will to take charge of one's life may become visible, and propel the individual to living more in accordance to his or hers principles, values and ethics. Simultaneously, such an insight may offer a potential for deeper acceptance and understanding of oneself and one's current life situation. Albeit that this may involve an uncomfortable but ultimately healthy sense of existential guilt. Looking back at the common assertion that 'bad' psychedelic sessions with anxiety-ridden or otherwise difficult reactions ultimately can be more therapeutic than 'good' ones, one could perhaps construe such sessions as involving a difficult but ultimately healing encounter with existential guilt.

The sense of groundlessness when faced with existential freedom involves the sense that there is nothing to hold onto. Mystical experiences can give the experiencer a sense of belonging and meaning that counteracts this groundlessness. These experiences are described as involving coming into contact with something that lies beyond all things and concepts, often described as sacred, a direct encounter with God, existence, or whatever one chooses to call it. The monism of the experience involves that one's consciousness is a manifestation 'in and of' this deeper aspect of the universe. Perhaps this offers a sort of ground that works as an opposite to groundlessness. When one feels that one's own self and one's current existence in this very moment in some sense is exactly the way it should be, and the way it always has been, and the way it always will be, this appropriates the opposite of groundlessness. Perhaps it lies again in self-transcendence: It is therefore suggested that when an ego-bound person realizes existential freedom it may entail the feeling of groundlessness, but when the 'self-transcendent being' encounters it, there is no one to be groundless, there is no ego desperately searching for something bigger to hold on to, it already *is* 'bigger', infinite even. Such a transcendence of groundlessness might contribute to one's capacity of appreciating the potential to take charge of one's life.

Existential isolation

Yalom (1980) argues that as one develops the sense of being a separate self, there is a never-ending search for belonging, for bridging the unbridgeable gulf between the individual, others and the world. Mystical experiences appear to take the individual back to the state of undifferentiated being that characterizes the infant's experience. Although objects still seem real and their interactions governed by causation, one also perceives the underlying unity of all things, including one's own consciousness and that of others. With this self-transcendence one is no longer separate, but feels instead totally one and at home exactly where one is, in the 'here and now'. Existential isolation is in a sense revealed to be a hoax, something which belongs to the self of our cognition, and which dissipates when the self does it. Removing the ego from the equation leave you at home in the paste of things wherever you are.

As Yalom (1980) writes, those who are not capable of facing the pure sense of being, and who therefore denies their constituting responsibility, believes they exists insofar as they are the object of someone else's consciousness. This represents an unhealthy interpersonal strategy. By revealing the hoax one may discover that one's constant search for confirmation of one's own existence through others is not worthwhile, that it can never leave one confident. Rather, one finds and confirms one's own being. This enables the person to be *with* others, instead of being *from* them, so to say. Consequently, a person who realizes his existence independent of others might be able to relate with others more authentically. This might also be seen as a prerequisite to developing authentic love, or what Yalom (1980) calls 'need-less love'.

The insight into the nature of being as something connected with the whole of the universe should in itself shatter the sense of existential isolation. One may appreciate one's part in the universe as equally important and central to the unfolding process of the universe as any other. Just as the whole of the ocean can be said to be *doing* any particular wave of the ocean, so can it be said that any particular wave is *doing* the rest of the ocean. At whatever point you go, you find that it is the intersection of 'the rest' of the universe. Instead of feeling like a lonely 'me' searching for belonging in a big, absurd and meaningless universe, one may appropriate the feeling that one is what the whole universe is doing at the place called 'here and now'.

Meaninglessness

One of the most striking aspects of mystical experiences is how meaningful people find them; many consider such an experience among the most meaningful experiences of their lives

(Griffiths et al., 2008; Griffiths et al., 2006). But can it offer any answers to the ever eluding question of meaning? Of course not, life and the universe remain a mystery. We don't know why or what or where. However, mystical experiences can increase one's capacity cherishing the mystery. The magnificence and intolerable beauty and violence of the universe can be appreciated for what it is, not for what one wants it to be. In a world where people sometimes might have the false impression that science has all the answers, or at least will have them at some point, it is easy to forget that all of this, existence, first and foremost is a mystery. Perhaps there is some meaningfulness to be found in simply seeing things as they are, even though questions remain unanswered.

I believe that Defense in the form self-transcendence again holds a key. Being a small and vulnerable ego, locked in a body, subject to deterioration and death, alone and cast about by external forces, creates a crucial demand for an answer to the why-question. Why all this suffering? What is it for? In contrast, being an eternal being residing only in the here-and-now, with freedom to influence one's future possibilities, and a convincing intuitive feeling that you belong, makes it all seem so much more bearable and perhaps even meaningful. Transcending the self also encompasses a feeling of connection to others and the world, facilitating altruism and compassion. It makes it a lot easier to care about something greater than oneself, which Yalom regards the most adaptive defense towards meaninglessness.

Having faced reality, and understanding deeply that this personal life is not everlasting, could propel one to immerse oneself in the stream of life and ask the why question later: "To hell with 'why', I've got life!".

A monistic view of reality involves that one can see all aspects of life as a stream of events that simply is unfolding. This means that all one's praise and blame, sorrow and happiness, etc., can be seen as intrinsic to the unfolding of the universe. The insight that for happiness to exist there must also exist suffering, makes all hardships easier to carry (Grof, 1980). Some might argue that our worst problems are not the pains that are an inevitable part of life, but the way we relate to this pain. Desperate for relief we grasp for something we don't have or otherwise avoid what we do have; we get caught in our own delusions about the self and the world, and by these futile attempts to avoid *all* suffering we might actually add to it. Through these insights one may instead arrive at a state in which all aspects of life are held in 'pure awareness', not something one needs to identify with, grasp or avoid. It is not dissociation or avoidance, but simply keeping in mind the bigger picture, what it is all really about.

For those who find cosmic meaning in particular religious and spiritual beliefs, a

mystical experience might cement those beliefs by offering a direct encounter with what can be construed as the source of this belief. This is often reflected in personal accounts of mystical experiences[5]. Such beliefs only serve as a significant relief for meaninglessness and other ultimate concerns if they are *firmly believed.* Spirituality have been associated with less psychosocial problems such as depression, hopelessness and suicidal ideation among seriously ill patients (McClain, Rosenfeld, & Breitbart, 2003; McCoubrie & Davies, 2006; Nelson, Rosenfeld, Breitbart, & Galietta, 2002). Mystical experiences can instill the experiencer with a sense of cosmic meaning, either secular in the sense of being a part of the unfolding of the universe or the like, or religious in the sense of interpreting the experience as coming in contact with what one believes in. With the noetic sense, this may give one a firm belief in something greater than oneself, even though it normally is out of sight. Such beliefs can provide great relief, perhaps especially for those lacking any firm spirituality or other meaning-giving beliefs in advance.

Conclusion

The revival of research into psychedelic therapy involves exiting and promising research into a method that has no current equal in psychotherapy. Contemporary and historical research strongly suggests it is a safe and promising method, but it is still too early to conclude on its efficacy. However, this may not be true for long, as more extensive clinical trials are underway. Judging from the research that has been presented it does not require a leap of faith to believe its efficacy will be demonstrated. However, it remains a considerable challenge to fit this method into the existing paradigm of psychiatry and psychology, especially considering its emphasis on spirituality and mystical experiences. Research has suggested mystical experiences are keys to the tentative therapeutic changes, but it would be ignorant to exclude other aspects of the experience that are known or unknown as well. However, in this thesis I have focused on mystical experiences and laid out how the effects can be explained by an existential psychological model.

Yalom presents self-transcendence as something all human beings strive for, and it has been discussed how it can make out an adaptive defense towards existential conflicts. On the basis of this discussion, one can infer that mystical experiences lead to therapeutic effects by instilling the individual with more adaptive defenses toward existential conflicts, mainly through the Defense of self-transcendence. Although the direct experience of self-transcendence is temporary, the memory of it remains, and the sense that the experience was

[5] See for instance p. 662 in Griffiths et al. 2011

true. This may lead to existential anxieties not having the same power over the individual as they used to. An additional change in adaptiveness of defenses can come from eradicating secondary defenses that themselves constrict growth and cause additional anxiety. Confronting reality in a manner which is free from self-deceptive views might eradicate these defenses as their very nature is avoidance of reality. Discovering or cementing spiritual beliefs may also contribute to beneficial effects, as such beliefs according to the existential psychological model can offer substantial existential relief. With regards to authenticity, mystical experiences can be said to increase authenticity by connecting the individual with one's 'true' self, a deeper sense of oneself than one's skin encapsulated ego, and with reality as it is experienced directly, leading to a heightened awareness of one's existential predicament.

As psychedelic therapy approaches being put to clinical use, I recommend further research in the domain of fitting this therapy into the pre-existing body of psychological and psychiatric knowledge, or developing new theories that successfully helps us predicate who might benefit from this therapy and explain how they will do so. This should also involve mayor clinical theories such as the cognitive-behavioral paradigm and the psychodynamic paradigm. Some aspects of mystical experiences can be particularly interesting in the light of certain theories, for instance how the convincing experience of not identifying with temporary phenomena such as thoughts, feelings and emotions, may be viewed in light of meta-cognitive theory, and how it might impact meta-cognitions about the self, thoughts and emotions. Future research could substantiate the claims put forward in this thesis by investigating patient attitudes and defense hierarchy's toward existential conflicts before and after psychedelic therapy. The concept of defense in the form of self-transcendence should perhaps receive special attention, as it seems central according to existential psychological theory. Identifying these sorts of possible change-mechanisms may increase our understanding of what particular aspects of psychedelic experiences hold the most therapeutic value and why. For psychedelic therapy to give long lasting effects, the process whereby the patient integrates insights and translates them to actually influence their lives is very important and should receive due attention.

Albeit somewhat counter-intuitive, one could say that mystical experiences make out the reality check of reality checks. For someone who have successfully avoided reality for some time, such a confrontation may be very uncomfortable at first, perhaps involving a great deal of existential guilt. However, ultimately this is healthy and perhaps necessary for personal change to occur.

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