The Influence of Recreational Drug use on Creative Behavior: A Qualitative Study in the Dutch Underground Art Culture

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Abstract

Illicit drug use is frequently attached to social stigma and linked to health damage throughout history. Even though in recent decades new knowledge yielded from varied fields have contributed to a more objective understanding of the effects of illicit psychoactive drugs and more benefits have been discovered in medicine and other disciplines, there is still a knowledge gap between scientific literature on recreational drug use and its relationship to artistic creativity. The present paper intends to explore and understand the experience and perspective of underground Dutch artists about the impacts of recreational drugs use in their creative endeavors. The aim of this study is to draw associations between recreational drug use and artists' creativity level, understanding the underlying motivations and the influence of drug use towards creative behaviors, as well as examine the benefits and the process and illicit substance use on creativity by use of qualitative analysis. For this reason, first, a systematic theoretical framework is conceptualized and addressed from existing literature. Based on the literature framework, a codebook was constructed with explicit motivations (themes) anticipated: affected emotions; heightened senses; altered states of mind, in addition to implicit motivations of well-being and personal freedom. The qualitative study adopts a semi-structured interview technique as a method of analysis. Ten Dutch underground artist participants of multi-disciplines disclosed their personal experiences of recreational drug use in-depth, as well as the influences and personal implications on their creative behaviors. Preliminary results confirm psychoactive substances can produce robust effects to enhance creative behavior, and findings demonstrate that illicit psychoactive substances used in recreational contexts can have positive influence on artistic creativity. To this end, this paper proposes that knowledge-based education should be communicated to the general public in order to achieve transparency and objective understandings, and that decriminalization of illicit substances under strict measures should be taken into consideration, for their beneficial creative capabilities.

The Influence of Recreational Drug use on Creative Behaviour: A Qualitative Study in the Dutch Underground Art Culture

Aldous Huxley (1954) vividly described the psychedelic phenomenon he experienced in the philosophical essay *the Doors of Perception*, which articulated his encounter with the enigmatic psychedelic substance mescaline. In a breathtaking passage, Huxley writes:

> The man who comes back through the Door in the Wall will never be quite the same as the man who went out. He will be wiser but less sure, happier but less self-satisfied, humbler in acknowledging his ignorance yet better equipped to understand the relationship of words to things, of systematic reasoning to the unfathomable mystery which it tries, forever vainly, to comprehend. (p. 123)

Ever since the turn of the century, recreational drug use has been a taboo that is often suppressed and discussed "under the table". Undoubtedly, penchants for psychoactive substances are looked at with disdain by the mass public due to its well-reported risk and danger. What is a pity is that the profound impacts of these illicit substances still remain little known to the vast majority today. It is notable to point out that, in recent decades, an increasing amount of media attention and clinical recognition initiated a third wave of psychedelics renaissance (Kelly et al., 2019). Expanding beyond the four classical psychedelic substances (viz., Lysergic acid diethylamide [LSD], psilocybin, mescaline, and N,N-Dimethyltryptamine [DMT or N,N-DMT]), more types of psychoactive substances has been brought to light in treating various mental disorders (Chi & Gold, 2020; Girn, Mills, Roseman, Carhart-Harris, & Christoff, 2020; Lewis, 2020; Nichols & Hendricks, 2020; Watts & Luoma, 2020; Zeifman & Wagner, 2020). To demonstrate, Power et al. (2018) noted that regular and

occasional users of so-called "party-and-play drugs"[1] reported a significantly higher level of social well-being and greater emotional well-being among HIV victims and gay and bisexual men. The latest trend of psychedelic research revealed the effects of diverse aspects of well-being enhancement, as a result, greater interests accumulated among modern academics, scientists, and health professionals. Concordantly, multiple studies yielded promising results, to illustrate, psilocybin microdosing is linked to lower levels of negative emotionality, the effects of LSD have found to increase amygdala connectivity in the human brain, and that MDMA can effectively treat post-traumatic stress disorders (PTSD) when used in combination with psychotherapy (Bahji, Forsyth, Groll, & Hawken, 2020; Bershad et al., 2020; dos Santos & Hallak, 2020). These researches illustrated, Inter alia, enhanced well-being intuitively foster independence towards generating creative behavior, which accordingly brings out the main topic of interest that this paper hopes to explore.

In spite of the latest scientific acknowledgments and prospects of psychoactive substances, the mainstream media has little positive to say about recreational drug use. Affected by the conventional educational information and legality status of recreational drugs, there is cultural consensus among the general public where recreational drug use is vastly perceived pejoratively. Social and health stigma is often associated with recreational drug use, vis-à-vis abuse, crime, and mentally unstable or insane (Kollath-Cattano, Hatteberg, & Kooper, 2020; Pieprzyca, Skowronek, Nižnanský, & Czekaj, 2020; Tsai, Hsu, Chen, & Kao, 2019). On account of the vast attention to the adverse effects of illicit drugs, in particular, narcotics that are exclusive to the psychedelic category, this paper intends to address a candid and unbiased revelation on the recondite, yet the remarkable and advantageous force that recreational substances may actualize. The attention of the present paper is predominantly centered on the impacts on Dutch underground artists and their creative behaviors. Much creative process is

[1] Drugs often used in the context of dance parties and nightclubs, or for sex, including crystal methamphetamine, other methamphetamines such as speed or ecstasy, gamma hydroxybutyrate/gamma-butyrolactone (GHB/GBL), and ketamine (Power et. al., 2018).

said to be influenced by illicit substances, the work of Dutch painter Henri Michaux was largely inspired by psychedelics (viz., LSD and mescaline), the book Strange Case of Dr. Jekyll and Mr. Hyde by Robert Louis Stevenson was written under the influence of cocaine, and postmodern author William S. Burrough was producing extraordinary work while being addicted to heroin, this suggested that psychoactive substance use may have been a powerful contributor to their artistic creative process (Iszáj, Griffiths, & Demetrovics, 2017). Psychedelics, for instance, were proven to ignite fascinating effects such as creating altered states of mind, which enable users to perceive reality in distinctive perspectives and manners. Other implications of the psychedelics-induced state include the expansion of consciousness, ego dissolution, and self-transcendence, as well as a rite of passage that lead to greater personal enlightenment (Evans, 2017; Lea, Amada, Jungaberle, Schecke, & Klein, 2020; Pollan, 2018; Walsh, 2016). Of relevance to these outcomes, the mystical experience is typically addressed as a "psychedelic trip", which can enable one's restricted mindset to be "unlocked". Subsequently, one is able to embrace diverse thought-processes and perspectives, ergo providing an understanding of life and to dive into one's creativity.

By the same token, philosopher Alan Watts (2013) depicted LSD as "simply an exploratory instrument like a microscope or telescope except this one is inside of you instead of outside of you" (p. 19). It may be worth noting that in the context of artistic creativity, psychoactive substances focused in this paper are not subject to safety regulation given its illegality. While a few scientific papers have concisely reviewed the association of creative process and drug use, most have focused on the mental health and abuse aspects. To the knowledge of this paper, there appears to be a knowledge gap between scientific research on drug use and artistic creativity, due to a lack of comprehension dedicated to substance-influenced creative behavior of artists in the Netherlands.

Objectives and Significance

Some creativity implications of psychedelic drugs have been established in existing literature, however, there is little acknowledged about other types of illicit psychoactive drugs and the effects on creative behavior. This study hence incorporates a wide range of illicit substances and aims to examine the subjective effects of artists' creative behavior. These drugs comprise of the dissociative substance ketamine, certain forms of methamphetamines, namely MDMA and Amphetamine, and the designer drug 2-CB. Simultaneously, the implications of traditional psychedelic substances are of equal significance and explored in this study. Creativity is unquestionably one of the most valuable assets for artists to achieve artistic competence. Correspondingly, the central question in the current study arises: *what are the motivations for the creativity behind the drug use of Dutch artists?* Closely connected to the central question emerges the subquestion: *what are the underlying processes of creative artists' motivation for drug use?* Specifically*, how do illicit substances affect artists' creativity, and what are the relevant benefits produced, both via and by recreational drug-use on the work of artists creatively?* In other words, the study aims to uncover in what ways creative processes and creative behavior are attained and advanced by the effects of recreational drugs.

We adopted an eclectic perspective to yield findings in this study, in which our conjecture is justified through the convergence of existing literature and theories reviewed in the theoretical framework section, in addition to insights and knowledge obtained after analysis of the current study's first-hand interview data. That is to say, a combination of inductive and deductive reasoning was used intending to arrive at valid conclusions. To explore these relationships, research was carried out using qualitative methods, where participants disclosed personal experiences of recreational drug use encompassing their creative endeavors through semi-structured interviews.

Prior to data collection, a construct of appropriate themes and notions affiliated to creativity and recreational drug use is presented. In the theoretical framework below, several potential processes of drug use for enhanced creative behavior are systematically provided.

Theoretical Framework

Creativity Conceptualization and Psychedelic Relevance

Creativity, defined on a board scope, focuses on the development of original ideas via discoveries and explorations. Creativity is characterized as a type of problem-solving, Leski and Maeda (2015) exemplified creativity as "*…a storm that slowly begins to gather and take form until it overtakes you—if you are willing to let it*" (p. 20). And afterward, "*…the quality of making, inventing, or producing—rather than imitating—and it's characterized by originality and imagination*" (p25). Botella, Zenasni, and Lubart (2018) defined the creative process as "*a succession of thoughts and actions leading to original and appropriate productions*" (p.3). On a similar note, Csikszentmihalyi (1997) depicted the creative process as a "*state of flow*", where the activity or situation at hand is with absorption or a state of complete focus. Befittingly, flow can be in turn interpreted as being in the groove or in the zone. Nathan (2019) stated that flow eases one to experience senses of contentment and well-being, in times when he is not impeded (viz., feeling anxious or suffering from boredom). Csikszentmihalyi (1997) constructed flow as "*being completely involved in an activity for its own sake. The ego falls away. Time flies. Every action, movement, and thought follows inevitably from the previous one, like playing jazz. Your whole being is involved, and you're using your skills to the utmost*"(p. 59). Though not explicitly regarding creativity, flow defined by Csikszentmihalyi (2004) characterized the concept of focus and being in the zone, as well as implicated the state of ego dissolution, and echoed an understanding of creativity in the views of Leski and Maeda (2015). Further, Csikszentmihalyi (1997) asserted that extraordinary creative behavior and experience actualize when one voluntarily stretches his mind or body to its limit, where

overcoming and achieving challenging yet worthwhile tasks. At a macro level, the creative process splits into multiple stages, and the micro-level illustrates the underlying mechanisms, such as divergent thinking and convergent thinking.

Creativity is arguably elusive and a rather complex quality to measure and assess in science, and above that, science and spirituality appear to be mutually incompatible. Regardless of this statement, studies measured divergent thinking in participants who microdose psilocybin on a regular basis (Anderson et al., 2018; Lea et al., 2020). Participants were assessed by performing daily tasks in creative manners (i.e., make use of common household items uniquely). Anderson et al. (2018) concluded that in comparison to the control group, participants who microdose displayed a higher level of creativity, as they were observed to make use of household items (e.g., knives and forks) in more distinctive and practical ways, which demonstrated effects of psilocybin may contribute to the enhancement of creative behavior. Consistent with Anderson et al. (2018), Girn et al. (2020) denoted in their findings that psychedelic states facilitated creativity generation, and more significantly, the use of psychoactive substances were thought to be of noteworthy potential. In addition, the study also assessed the chemistry of psychoactive compounds and highlighted its feasibility as prominent tools in creativity generation prospectively.

The Significance of Psychoactive Substances in Art and Science

Emerging influences in contemporary science generated growth of attention towards psychoactive substances. In relation, mental health professionals also perceived illicit substances in a more progressive mindset, where a more objective; knowledge-based understanding of psychoactive drugs took place, in spite of their prohibited statuses. Along with the studied anti-depressant effects, Springer (2018) reported psilocybin's enduring effects on creativity and problem-solving ability. In the same direction, the enhancement of creative behavior was found to be associated with psychedelic use. Studied by many medical

professionals, the effects of psilocybin are recognized to embark powerful mind-altering sensations, occasionally facilitating the process of self-actualization (Girn et al., 2020). Briefly addressed in the introduction, the psychedelic trip takes its user on a mind-altering journey. The subjective effects of the hallucinogenic psychoactives include intensified senses (e.g., perceiving infinite geometry and vibrant colors), and occasional encounter of dual realities. The altered states of minds generate greater amounts of sensitivity in perceiving the world, therefore ideas and thoughts that are unusual can result in creative behavior.

Psychedelic Medicine: a Reviving Therapeutic Paradigm

There is a medical consensus being held among researchers about psychedelics, one that promises an intriguing future for psychiatry practices. Scientists nowadays are examining a wide range of psychological disorders such as OCD, depression, eating disorders, and nicotine and alcohol addiction, which are treated by illicit drugs (Pollan, 2018). Evidence consistently displayed the robust efficacy of psychedelics in treating mental disorders (Anderson et al., 2018; Davis, Barrett, & Griffiths, 2020; Domínguez-Clavé et al., 2016; Dutta, McKie, & Deakin, 2015; Nichols & Hendrick, 2020). This can be illustrated by cancer patients who, faced with terminal diagnoses, had to endure extreme psychological stress due to the fear of dying, in addition to the acute physical pain due to their treatment process (Griffiths et al., 2016). Correspondingly, Griffiths et al. (2016) gave patients high doses of psilocybin in the hope to mitigate their mood disorders and reported that a substantial number of participants had redefined their perspectives on their illness and the prospect of dying. More remarkably, some participants claimed that the fear completely disappeared after one single guided psychedelic trip. The recurring medical acknowledgment indicated that certain illicit psychoactive substances are able to enable enhanced well-being. Grounded by Griffiths et al. (2016), more studies have supported psychedelics' effects to optimize well-being, and accordingly impact creativity (Hupli, Berning, Zhuparris, & Fadiman, 2019; Kuypers et al., 2019).

Ego dissolution and implications on the creative process

The effects of LSD on the human mind is thought to be a short-term transformation of perceptions. During the process of the *tripping* experience, alteration of thoughts, feelings, and awareness typically effectuate, the sensory experience is animated into what is best illustrated as the perception of a child (Pollan, 2018). Provided that adults' perceptions are based on past experiences, children, on the contrary, are not familiar with most aspects of the world, perceive reality in fresh and naive minds. Under the influence of LSD, the conventionalized, shorthand modes of the default adult perception are disabled. On that account, like seeing everything for the first time, a childlike immediacy is restored, provoking a sense of wonder towards experiencing reality (Evans, 2017). Consequently, altered perceptions affect the mind to become a temporary "blank canvas", and day-to-day emotions and sensations are provisionally neglected. As a result, awareness of "cognitive liberty" is realized, and it in turn capacitates creative behaviors.

In order to accomplish cognitive liberty, there is a need in understanding the concept of the ego, as cognitive liberty partially embodies a loss of ego (Walsh, 2016). The sole function of the conscious ego is to compose desires and wishes, which are based on forces that are of little control and of no understandings. When the ego seeks to do things other than formulating wishes (e.g., worrying), it becomes apprehensive about the future. The apprehension in turn deteriorates the effectiveness of the forces and may even result in the weakened body falling ill (Evans, 2017). Evidently, psychedelics can drastically modify users' perception of reality for three to twelve hours by binding serotonin receptors. At high doses, users encounter a supposed mystical experience that is widely known as the dissolution of the ego or ego death.

New perspectives and distinctive ideas are initiated through ego dissolution, in which it is predominately effectuated via the consumption of psychedelic substances. The dissolved ego

is speculated to be one way of facilitating creative behavior, given its rare ability to enable humans to "*see things with new eyes*" (Germann, 2019), this is processed as a decreased influence in the perceptual schemata's organizing and structuring. When an individual undergoes such experience, the self-identity is lost temporarily, while not closing down his mental process. Rather, the subject's sensory input no longer experiences the concept of "I", leaving the sensory input as "itself" alone. By being in an egoless state, the routined waking life sensations of an individual as a single entity is suppressed, he then becomes apart from the external world (Pollan, 2018). In the state of non-dual consciousness of ego dissolution, the experiencer remains conscious, where his ability to think, as well as the control of thinking, is in typical functions. The ego-dissolving effects result in obtaining neutral views and attitudes when perceiving concepts, where prior memories, past experiences, prejudices, and biases that were associated become also no longer present, thus fabricating unparalleled, transformative peak experiences (i.e., ego dissolution). Psychoactive substances with the capability of triggering ego dissolution are *sui generis.* Endogenous to the human psyche, the enigmatic molecules are of profound psychedelic effects in particular to thought processes and creativity (Germann, 2019). Germann proposed that ego-dissolving compounds have the potential to enrich the current knowledge of neuronal and psychological processes, shaping human cognition and creativity, such as higher levels of global functional connectivity.

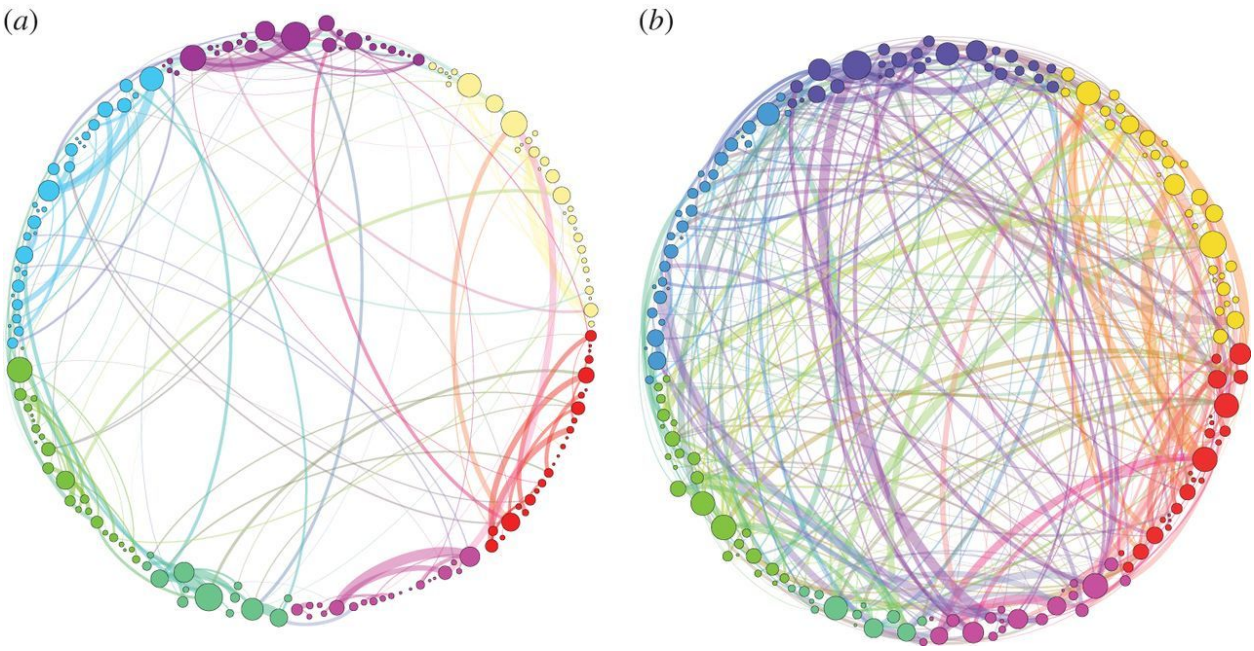
The "Eliminative" Brain. Ramsey (2020) suggested that in order to survive in the modern age, the human brain has evolved to become "eliminative". The eliminative brain is a philosophical theory stating that the brain narrows down one's daily experience and perception, in order to prevent being overwhelmed by the busy world. In other words, for the purpose of survival, mankind has adapted to have more additional attention; the narrow and concentrated perception, instead of experiencing a grandiose and rich reality of illuminating colors. Certainly, literature demonstrated that the brain tends to cut down on distractions and seeks focus and vision, in particular for the working memory. Germann (2018) asserted that capitalistic

"economic" systems are primarily based on marketing principles that systematically create desires and exploit impulsivity, subsequently generating a loss of global creativity.

The dissolution of ego achieved by the use of psychedelics sparked off captivating afterthoughts to the art world, which gives great relevance to this paper. Essentially, deriving from Greek meaning as psyche, soul, or mind, the term psychedelic bespeaks a meaning of "mind-manifesting". Closely related to ego dissolution, the term ecstasy defines "standing outside of the self" in the literal sense. The implication of psychedelic's definition and origin hence denotes an untouched potential of the minds. The loss of subjectivity and the neutrality of perspectives were thought to map out a blank canvas for artists to create. Michaelangelo epitomizes the ingenious effect of ego dissolution to creativity and art, he stated "Every block of stone has a statue inside it and it is the task of the sculptor to discover it. A man paints with his brains and not with his hands". When one's ego is dissolved, one merges with something larger, and the feeling commonly initiates as a sense of interconnectedness. The loss of ego indicated the importance to let go of the ego on occasions in a competitive and anxious society, whereas a self-centered, ego-orientated life leads to increased possibilities towards exhaustion, boredom, and depression (Pollan, 2018). In figure 1, Petri et al. (2014) illustrated comparison of the human brain connectivity when in a sober state and under the influence of psychedelic drugs.

Figure 1

Sober VS Tripping Brain After LSD Ingestion (Petri et al., 2014)



Note. (a) represents brain connection generated in the sober state, whereas (b) represents the amount of connection and activity of the brain when one partakes LSD.

The short-time increased interconnectivity displayed in (b) signified a possibility for brain activities to re-organize and form new connections; individuals may view the world from brand new perspectives. Furthermore, connections appeared to be steady and organized, instead of random. After the effects have faded, the connections returned to the state of the brain before onset (Petri et al., 2014). Researchers concluded:

> We can speculate on the implications of such an organization. One possible by-product of this greater communication across the whole brain is the phenomenon of synesthesia

which is often reported in conjunction with the psychedelic state (Petri et al., 2014, p. 20).

These findings of psychedelics and ego dissolution convey significant implications on creativity, nevertheless, the abiding effects are still much of a speculative hypothesis (Cole, 2020). Based on the studies of Germann (2018) and Murdoch (2013), specific types of psychoactive substances enabled users the prospect of increased appreciation of nature and enhanced vitality in the perception of existence and well-being. On top of that, medical professionals put forward researched-based knowledge in favor of the value of ego dissolution and its implications to creativity increase, they asserted "an understanding of the psychological and neurophysiological processes which undergird ego dissolution (i.e., nonduality) is pivotal for advancing our scientific understanding of creativity" (p. 24).

The With-standing Relationship between Art and Drugs

Examined literature proposed in a consensual manner that psychedelics' hallucinogenic attributes are suggested to expand creative process, as well as strengthen creative endeavors of artists (Germann, 2019; Nour et al., 2016; Swanson, 2018; Watts & Luoma, 2020). Apart from the potential to initiate psychological liberty to elevated cognitive well-being (i.e., let go of self and the absence of stress), Lea et al. (2020) and Pollan (2018) also promoted LSD microdosing in favor of achieving mental well-being. Significance in Art is coherently indicated in the findings of Iszáj et al. (2017), they proposed that LSD in micro-dosage was identified to prompt *sub-perceptual* results (viz., subtle yet prominent), which resulted in notable improvement of focus, creativity, memory, mood, and productivity.

LSD is widely recognized as a powerful, mind-altering drug, and more and more experts are moderately familiarized with its profound effects of artistic creativity, inter alia (Girn, 2020; Janiger & Dobkin, 1989; Nichols & Hendricks, 2020). The creative input was first investigated in the Psychedelic Era, where researchers yielded prospective findings to creative enhancement,

which in turn facilitated scientific progress in the so-called *psychedelic renaissance* (Pollan, 2018). One early-day study explored the relationship between creativity and LSD, Janiger and Dobkin (1989) compared two paintings of each artist who painted both one hour before and after the ingestion of LSD. The researchers denoted distinctive changes in artists' representative style. Researchers derived considerable alterations in artistic styles of LSD-influence. For instance, artists whose styles were predominantly abstract were changed to expressionistic approaches. A majority of artist participants pointed out that the work under their LSD experience was perceived to be more exciting and aesthetically pleasing compared to their usual forms of expression. *In concreto:* LSD's enhancement of artistic creativity is found to be remarkable and effective. The mind-altering qualities of LSD conceived unique visions and thought processes in artistic creativity, which produced implications on creative enhancement in art. Greater satisfaction was indicated by artists regarding their LSD-influenced paintings, in comparison to the paintings created in their unusual state of mind. This study provided the potential for LSD to manifest increased credibility in artistic value. More significantly, the findings showed that style changes during LSD experience strengthened artists' confidence and provided assurance of self-esteem as they were constructing new meanings to an emergent world (Iszáj et al., 2017)

The Psychedelic Power of Transcendence, Philosophical Enlightenment, and Elevated Artistic Creativity

Elevation of creativity occurs when one establishes less self-judgment and more clarity in the purpose of life, and this can be experienced through the great force produced by psychoactives, specifically of substances belonging in the psychedelic class. Various proclaimed philosophies encompassed the notion of self-transcendence, and creativity is thought to be influenced to a great extent. Huxley (1999) praised the dissolved ego as doubly valuable, which he articulated "...it is valuable because it gives the experiencer a better understanding of himself and the world and because it may help him to lead a less self-centered

and more creative life". Congruent with this psychedelic contemplation, Huxley promoted a specific way of life (viz., experiencing reality), of which transcends creativity. The eureka moment was realized during his mescaline experience written in *the Door of Perception*, and it enabled him the experience of living a more creative life (Wisercrack, 2015). The dose of mescaline consumed is believed to have elevated Huxley into a higher state of consciousness that was in part influenced by the intense visual hallucination. Huxley described the self as being "... struck by the lively dissonance of its colors", while being perplexed and in awe of the grandiose sensations and illuminating colors of the world.

Substantially, Huxley (1954) captured various perceptions of art under the influence of mescaline. Huxley pondered the notion for average men (viz., ordinary beings) to notice and recognize the immense beauty in art would entail a necessity of ingesting mescaline. Conversely, artists are able to intrinsically spot and perceive the divineness of art and creativity in subtle, trivial things, while most people may have deemed them grotesquely dreary. Furthermore, Huxley noted under the effects of mescaline that any musical piece can incite enjoyment. The ideas ignited an onset of substantial interactions between the effects of psychoactive substances and the perception of creativity followed by the creative behavior of artists. Over and above, perception is heightened by hallucinogenic drugs consumption, where realities are perpetually altered in one's consciousness. More remarkably, the after-effects are most persistent and long-lasting (Faraci, 2017). Huxley (1954) revealed that when under the influence of mescaline, the look of the beauty of a flower felt overwhelming and it could be explained far beyond language, the emotion may be only expressed through art. Consequently, creativity was envisioned in a whole new light by dint of psychedelics. Huxley underpinned the profound usefulness that psychoactive substances may pose on creative behavior. A common effect of recreational drugs is the heightened senses users experience, it is presumed that a strong liking to reach drug-induced altered states of mind may be an implicit process for many people to use drugs, which also includes the artist participants that this study intends to

explore. The incentive of letting go illustrated another anticipated motivation of drug use among artists for elevated creative behavior. Huxley (1980) argued, "Most lead lives at worst so painful, at best so monotonous, poor and limited that the urge to escape, the longing to transcend themselves if only for a few moments, is and has always been one of the principal appetites of the soul" (p. 40).

The Influence of Drugs on Well-being and Creativity

Not only the impacts of psychoactive substances reveal a promising future in clinical and psychiatric practices, but recreational drug use is also denoted as a social activity that provides its users a source of friendship, support, and happiness (Power, 2018). While harm and health risks of party-and-play drug use are undeniable, well-being benefits are being provided by these drugs in the social contexts. Party-and-play drugs are a list of illicit substances that are often used in the settings of dance parties, night clubs, or for facilitating sexual pleasures. These substances include crystal methamphetamine and gamma-hydroxybutyric acid (GHB). Power et al. (2018) found regular and occasional party drug users with significantly greater social well-being than non-users among HIV positive gay and bisexual men. Participants also reported a larger sense of emotional support from the HIV community, and their friends in general. In addition, higher levels of resilience and less experience of HIV-related stigma were also more common among party drug users. Nonetheless, there is no claim that long term well-being is directly affected by drug use in any form, it could also be that people who are more socially connected and with higher resilience are more likely to be involved in social circles where drug use is common. Recreational users reported drug use for the purposes of energy increase, social aids, and in general, "to have fun" (Moore & Measham, 2008). For HIV positive patients, party drugs may be appealing because of the HIV-related stigma they may experience, or it may be rejection by sexual partners, so that they may feel a sense of acceptance into social and sexual networks by using drugs (Power, 2018). Friendship, bonding, intimacy, and sex are vital to mankind, and the findings of studies like Power et al. (2018) implicated important

considerations of the possibilities of social loss once drug users end their drug use, especially when one's social circle is strongly affiliated with drug use, as cease of drug use may result in the suffering of social and emotional well-being. On the same line, Moore and Miles (2009) concluded in their study that recreational drug use is not harmful psychologically. And that despite drug abuse is held with a variety of social problems, experimenting with drugs also imparted to well-being and social adjustment. Accordingly, as addressed in the aforementioned section, well-being affects creativity, thereby relevance is found between recreational drug use and creativity.

Having explored a structural framework through literature, we highlighted the implications of psychoactives and gave specific attention to creativity and creative behavior. We anticipated possible responses of participants to the central research questions. As motivations to generate creative behaviors, we investigated illicit psychoactive substances' effects, including affected mental states, heightened senses, well-being, and etc (see flow chart in method section). Additionally, explanations and rationales from the literature were adjusted to justify notions and themes provided in the method section.

Method

The study undertook after receiving ethics approval from the University of Twente BMS committee. In order to comprehensively explore the perspectives of creative individual artists whose work is drug-influenced, this qualitative study adopted a combination of interpretivism and grounded theory. To avoid social desirability and acquiescence bias, the researcher maintained a professional attitude and acted as the role of a learner and was not positioned either against or in favor of recreational drugs. The reflexive practice of memoing was used, and the researcher interacted frequently with participants throughout the interviews. This was to evaluate and reflect afterward on the neutrality of the researcher's attitude, which was to

minimize misinterpretations, while also preventing researcher bias, such as prejudice due to experiences, presuppositions, and personal or professional backgrounds.

Participants

Eleven participants (N=*10*) ranging from age 20-47 served as subjects in the study. The interviewees came from five cities in the Netherlands, namely Enschede, Hilversum, Groningen, Arnhem, and Amsterdam. The subjects were reached out using snowball and convenience sampling, and the sample consisted of four female and six male participants. The study targeted this population for the reason that subjects were believed to be inherently creative and open-minded, as these character traits were the aptest for investigating the relationship between drug use and creativity. Open-mindedness is intrinsically linked to creative behavior (Zhang, Xu, & Sun, 2020), not only are creative people who are familiar with recreational drug use the appropriate target group, but they also belong to the open-minded pool.

The subjects were selected to most accurately represent a diversity of work in the Dutch underground art and music culture, which is why the following artists were chosen to take part: two music producers, two photographers, one electronic music event organizer, one painter, one Freetekno soundsystem[2] figurehead, one murals artist, one visual artist, one sculpting artist, and one lyricist. Further, pre-conditions were required that the subjects were familiar or experienced with recreational drug use and spoke English at a sufficient level.

Interview Design

A short introduction was given at the beginning of the interviews, where the researcher briefly clarified the aim and purpose of the study. Informed consent documents were handed out to each participant beforehand. After reading and signing the document, the researcher

[2] Non-profit raves and a cultural movement that mostly lean towards anarchist philosophies and opposing mainstream and commercialism (V. van der Weegh, personal communication, May 20, 2020).

answered additional questions from the subjects, this was to ensure that participants have obtained a basic understanding of the study. A question list was designed to provide the researcher a general structure of the interviews, as well as to generate conversations (see Appendix 1), and the questions constructed were based on literature and online research (CSUN, 2020). The interviews were not entirely pre-structured vis-à-vis formulation, content, and sequence, improvisation was carried out without premeditation. Semi-structured interview design was chosen for degrees of freedom and flexibility towards the responses provided (Boeije, 2010). The interviews began with sets of simple and conceptualizing questions, such as "What is your definition of creativity?". This was done to enable participants to familiarize themselves with the general topics, as well as to provide space for creative people to define and explain their perspectives on creativity, before diving deeper into the more relevant questions. After sets of warm-up questions were answered, the researcher continued the dialogue with the help of the prewritten question list, this facilitated the interviews in the desired direction, and in an effort to reduce chances of going off topics.

The question list consisted of 30 open-ended questions with the objective to attain descriptive answers, and each question was designed to seek responses of relevant themes that were anticipated. Themes (i.e., codebook) and questions aimed to collect the according responses were placed in a table which can be found in Appendix 2. The questions were framed attentively to reduce habituation bias and wording bias. The researcher asked different sets of questions to the interviewees depending on their previous responses, probes were developed for the elaboration of responses, and follow-up questions were asked to gather more detailed and relevant findings. The main goal of the researcher was to form extensive understandings of the associations between recreational drug use and creative behaviors through respondents' experiences, attitudes, beliefs, and perspectives. Interview techniques such as bridging were enacted in order to generate overall coherence in the conversations. Moreover, the active listening technique was constantly practiced, which implicitly projected

empathy and engagement in the interactions. Due to the ongoing Coronavirus pandemic, the interviews took place at the homes of the researcher and interviewees. All interviews were conducted in enclosed rooms, which was to ease forms interruption. No computer was present throughout the interviews, the researcher sat across from each participant, and recorded notes with a pen and notebook as a means to avoid typing noise distractions. Additionally, the researcher kept a relaxed and casual impression aimed to prevent the nervousness of participants.

Data Collection

Each participant was booked for an appointment of 80 minutes, and all interviews were conducted by one researcher with the assistance of the semi-structured question guide. In this sample population, nine interviews were conducted face-to-face, with one exception of online Skype interview video call as a compromise, because it was in the midst of the Coronavirus Pandemic. Confidentiality was established by replacing participant names into numbers ranging from one to ten. Face-to-face interviews were recorded via smartphone recorder, and the video call was by Skype recorder, while the researcher hand-wrote additional relevant details simultaneously. Face-to-face interviews were chosen for maximum transparency of communication and in order to capture non-verbal cues such as emotions and body language. Both predetermined and spontaneous open-ended questions were asked, intended to facilitate articulation of answers, to apprehend motivation and perspective about drug use on creative behaviors, as well as the implications of drugs on the creative process. Nonetheless, the interviews mostly followed a free-flowing, spontaneous structure, whilst making sure that the focus encompassed the research questions.

Codebook

In order to yield definitive findings and avoid overlap of themes, all codes were constructed to be distinctive and comparable. The codebook was designed through both

deductive and inductive reasoning. The majority of codes were deducted through literature exhibited in the theoretical framework (i.e., concept-driven codes), and inductive reasoning was used by identifying new codes from the interviews (i.e., data-driven codes). Some of the data-driven codes were developed from interesting ideas spotted in the interviews, others displayed concepts and patterns of how recreational drug use impacted artists' creative behavior. The codebook was divided into overt measures and covert measures, overt measures were concepts (i.e., effects of drugs) interpreted to directly affect creative behavior, where covert measures indirectly influence creative behavior.

Data Analysis

This study adopted a theme-oriented interpretative analysis. After the initial data collection, audio recordings were transcribed verbatim to reduce information loss and data manipulation. Handwritten notes were typed out, reorganized, and put together with the corresponding data. Transcripts were uploaded to the qualitative analysis software Atlas.ti.

In the phase of data exploration, data were first divided into fragments with reference to research relevance. Afterward, fragments of data were compared, conceptualized, categorized. Codes were labeled according to the codebook, using open coding. Open coding was the chosen technique since it supported the thematic approach to the study, while also contributed to clearer data organizations (Boeije, 2018). Codes (sub-codes) were grouped into themes (main codes) related to the conceptual domain of research, which allowed easy interrogation in Atlas.ti across these domains (Atlas.ti- Qualitative Data Analysis, 2016). A selection of fragments was coded in terms of relevance to the research questions, that is, only meaningful fragments were assigned with codes. Different fragments were compared to prevent redundant fragments addressing the same observations, therefore fragments that overlapped have received the same code.

Intercoder Reliability

With the aim to produce objective data interpretation, Cohen's Kappa was calculated to measure the intercoder reliability, where the agreement rate between two coders was assessed. This is done by the partake of a second coder, who simultaneously coded three interviews (20%). Prior to coding the data, the second coder conferred with the researcher about each code, which was aimed to generate a sophisticated coding system, while also ensuring adequate codes were systematically appointed to specific fragments. With reference to the established codebook, two coders concurrently read and segmented the data, thereafter followed by further in-depth discussions on the differences in code labels, as well as on new themes that emerged. Assessment of intercoder reliability took a repetitive and iterative process, and the main coder started to code independently after four rounds of coding. The two coders eventually reached a consensus, which displayed consistency in codes assigned to the fragments. Furthermore, data validity was indicated when data saturation came into view. Below in figure 2, a cross-check table and the subsequent Cohen's Kappa are presented.

Figure 2

*Cohen's Kappa for Interrater Reliability: Coder One * Coder Two Crosstabulation*

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Coder1 * Coder2	22	100.0%	0	0.0%	22	100.0%

Symmetric Measures

		Value	Asymptotic Standard Error[a]	Approximate T[b]	Approximate Significance
Measure of Agreement	Kappa	.707	.099	12.745	.000
N of Valid Cases		22			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

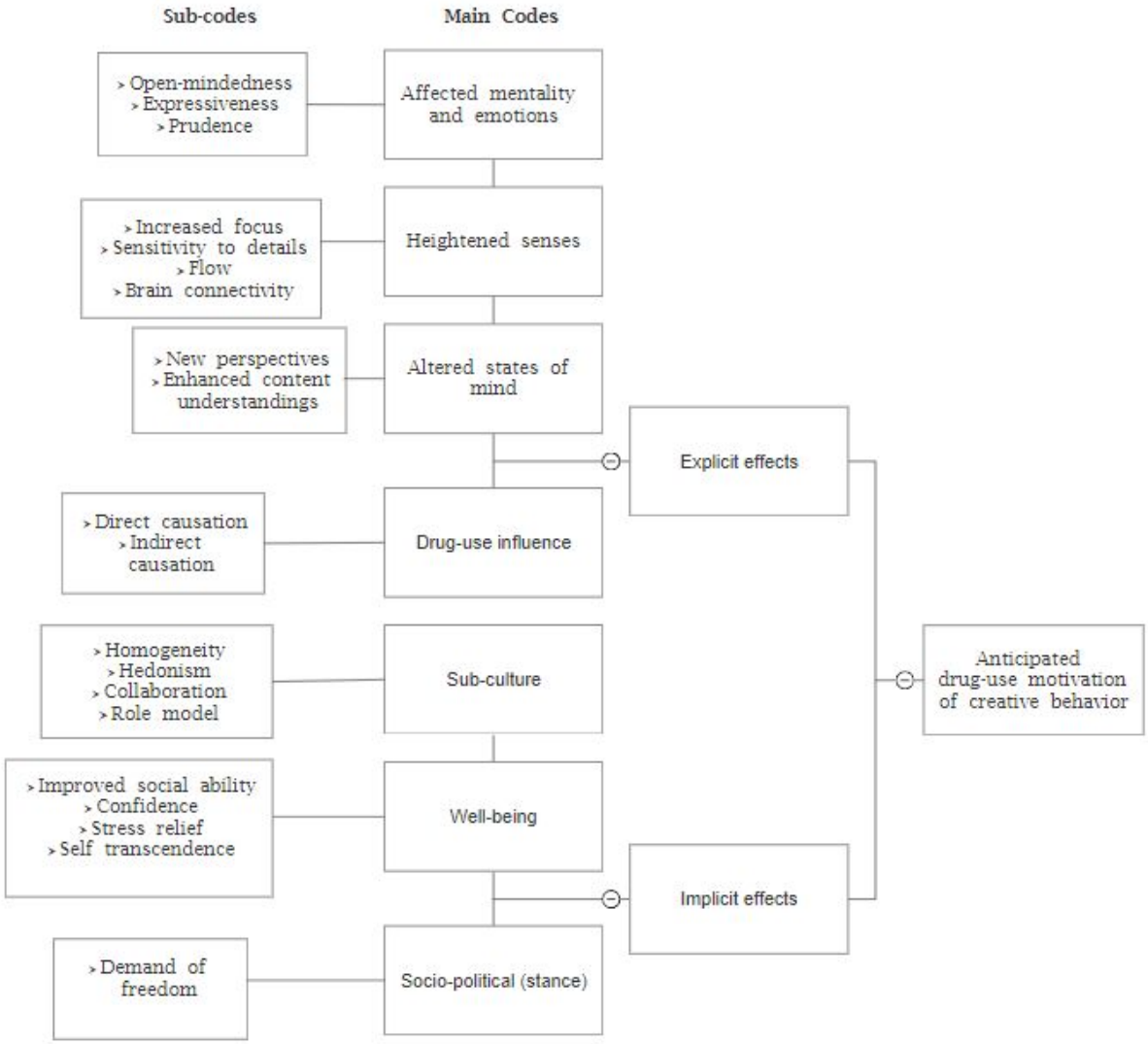
Note: Cohen's Kappa was calculated using SPSS analysis.

Thematic analysis

Thematic analysis encouraged a rich, yet complex account of data, and imparted flexibility to modify according to the area interest of the present study (Braun & Clarke, 2006). The process included familiarization and iterative reading of all transcripts and partial coding of appropriate information in the data. Due to its large size, the thematic analysis table is presented in Appendix 2. Further, findings were viewed through the lens of hierarchical task analysis (HTA) because it provided a clear overview of the code structure, in addition to the extensive information about the codes (Stanton, 2006). Below, figure 3 illustrated the anticipated process and motivation of artists' drug use in creative behavior. During the analysis, attention was given to the motivations and underlying processes of recreational drug use, on the interactions with the creative behaviors of Dutch underground artists.

Figure 3

Flow Chart of Anticipated Associations Between Creative Behavior and Underground Art Culture



Note. Codes were constructed based on the theoretical framework and organized into the codebook, and data were coded according to the codebook.

To maximize clarity and theme consistency in the result section, some quantifying language is explained. To exemplify, the term "most" is referred to when a minimum of eight (out of ten) interviews accounted for a particular theme, whereas "many" is demonstrated when a minimum of six participants contributed insights towards a certain theme. Lastly, the terms

"several", "specific", or "some" denote when a theme was present in less than the majority of the participants (N= *5*). Nonetheless, it is important to point out that the absence of a certain theme in an interview input did not necessarily illustrate that a belief was nonexistent, rather, it was not mentioned in the course of data collection.

Result

Ten artists participated in this qualitative study, participants disclosed both positive and negative impacts of drug use in relation to their creative behavior. A total number of nine recreational drug types were mentioned throughout data collection (viz., amphetamines, cannabis, cocaine, DMT, ketamine, LSD, MDMA, psilocybin, and 2CB). Of the ten artist participants (n=*10*) who were included in the qualitative interviews, 45.45% asserted explicit influence of recreational drug use on their creative behavior, 36.36% disclosed implicit (i.e., partial causation), and 18.18% claimed non-causation of drug use to their creative behavior. Below in the thematic summary, an overview of findings indicating the effects and motivations of drug use on creative behavior is provided.

Thematic Summary

The following significant themes yielded from analysis explicitly affected artistic creativity: (a) affected mentality and emotions: open-mindedness, ease of expressiveness, and transformation of thoughts into creation; (b) altered states of mind: new perspectives formation; and (c) heightened senses; hyperfocus, increased task completion motivation, and self-empowerment and risk-taking. The conceived main themes and corresponding sub-themes were illustrated by relevant quotations summarized in a table placed in Appendix 3.

Main Findings

Theme 1: Affected Mentality and Emotions

Recreational drug use was reported to create positive changes in individual's creative characteristics and traits, which fostered a foundation for artists to generate creative behaviors. ***1.1 Open-Mindedness.*** Most participants believed that drug use has allowed them to become more open-minded in a creative sense. Their minds and perspectives were broadened after experiences with using recreational drugs; they became more receptive to new ideas, which produced unconventional thoughts and thought patterns, free-thinking, and implementation of unique creation. More interestingly, some participants disclosed that creative behavior is rather enhanced by open-mindedness. Accordingly, curiosity in trying drugs was found as an outcome of being open-minded, and consequently, the reciprocity of drug use and open-mindedness led to increased artistic creativity.

1.2 Ease of Expressiveness and Transformation of Thoughts into Creation. Many participants indicated that drug use decreased the difficulty in expressing ideas and thought processes in their creative endeavors. Under the influence of drugs (e.g., MDMA) enabled artists to transform emotions and feelings into words, lyrics, music, paintings, and other artistic articulation.

> (On lyric writing) *Taking MDMA and ecstasy put me in a state of mind which, you know, made me sexually aroused. And in this sexual arousal, I felt like I had to put this in words, because the expression of this feeling is usually only done through physical like sex. Having sex is actually more than you can express your arousal, I guess, and stimulation and these kinds of things. But I wanted to put it in words. So I just in the same state of mind as wanting to have sex, I just put that energy into writing the lyrics*

for that particular song, which it was about sex and making love and stimulation and the pleasure of having sex.

Theme 2: Altered States of Mind

Many participants spoke about the drug-induced altered states of mind and consciousness as an advantageous creative behavior enhancer.

2.1 Formation of new perspectives. Creative behaviors and personal insights occasioned by drug hallucinations encouraged artists to explore unfamiliar artistic genres, which involved experimentation of diverse, unusual colors and styles, thus drug use expanded the creative behaviors of artists. Besides the hallucinations, some participants spoke about the insightfulness of tripping on psychedelics, who claimed that psychedelic experiences provided them a glance of the vastly creative, unimaginable realities. Moreover, some participants asserted that psychedelic trips granted them an entirely new, foundational acceptance of the perspectives that other people may possess, allowing them to live outside one's own life and stand in others' shoes. Consequently, creative behaviors are enlarged through these exhilarating perceptions.

Theme 3: Heightened Senses

Most participants expressed that the effects of drugs created intensified sensations for them, such as the exacerbated force of music penetrated into their ears when under the influence of ketamine, they found themselves to be immensely connected to the music they were creating.

3.1 Hyperfocus. Participants indicated that recreational drug use facilitated themselves into states of hyperfocus. This is particularly beneficial to artists who are easily distracted by the surroundings, or who are diagnosed with attention deficit disorder (ADD) and attention deficit hyperactivity disorder (ADHD). Hyperfocus facilitated artists to enter their creative flow, by perfecting creative projects with attentive details and high concentration. Drugs enabled artists

to disregard trivial matters and devote themselves to their tasks at hand, this in turn generated high-quality artwork and music productions, as well as enhanced creative behaviors.

> (On cannabis) *What happens I think is that when I then smoke it really puts me in my zone like it makes my world very small. You know, it makes my mind very focused on only one thing. You're in a bubble, in a tunnel vision, and then you can really be in a private project and be stuck in it in a flow and not so much thinking about all the stuff that comes afterwards. Like, what am I going to do with this music or with this idea? Who will be interested in that stuff later? And you don't think about the art.*

3.2 Self-empowerment and Risk-taking. One fascinating finding was that stimulants exemplified by amphetamines and cocaine elevated artists' self-esteem, this engendered artists' execution to be bolder and more adventurous. Accordingly, they claimed to be more creative regarding techniques and styles. Some participants explained that when combining depressants such as ketamine or alcohol with stimulants, they were able to perform more creatively by means of taking more risks in their creative process. To demonstrate, one participant disclosed:

> *(On mixing music) Cocaine affected me in a positive way. When I don't drink too much, I will loosen up a little bit and feel a little bit more free or daring. Tried to do some tricks, where (normally) I wouldn't have dared. Oh well with a couple of beers, you're really into it and you're not scared to make a mistake.*

3.3 Task Completion. Besides the implementation of difficult tasks, participants also indicated that, due to the iterative nature of art and music creation, amphetamines are particularly helpful in the finalization phase of creative projects. Related to the aforementioned risk-taking and hyperfocus, two artist participants illustrated:

> *I finish things with drugs. When I started the project. Most of the time I feel insecure. I think man, what am I gonna do. Thinking too much, having high expectations. I take drugs and then all those feelings are gone. And then I just do.*

But that's kind of good for the last difficult half of creation with the finishing up. I mean, I always have the first strokes of an idea that's always the easiest for me. But the effort it takes to polish it into a finished end product, that's. Well, you need a lot of motivation for that. And to me, amphetamines can help there.

Additional Findings. In association with these pre-established themes, the interviews also yielded new themes that indirectly influenced artists' creative behaviors. This will be discussed below.

Discussion

Besides findings that indicate the direct causes of motivation to trigger artists' creative behaviors, two implicit themes are discovered on the associations between creative behavior and recreational drug use encompassing Dutch underground artists. We propose that the underlying process of artists' creative behaviors impacted by recreational drug use are (a) sense of well-being; elevated by effects of recreational drugs; and (b) distinctive stance of politics and way of living; a longing for freedom. We argue these two themes revealed by analysis realize significant implications on the enhancement of creative behavior. In table 2 below, two themes and sub-themes that indirectly affect creative behavior are summarized.

Table 2

Implicit themes and subthemes associated with artists' creative behavior influenced by drug use

Implicit themes	Subtheme

4. Elevated well-being	4.1 Improved social ability
	4.2 Stress relief
5. Socio-political stance	5.1 Personal freedom

Theme 4: Well-being

In accordance with concepts and studies supporting drug use as a result of an improved sense of well-being (Evans, 2017; Pollan, 2018; Power et al., 2018), we found supporting evidence in the disclosure of artist participants. Most participants shared the view that the effects of recreational drugs improve their state of well-being and peace of mind, subsequently enabling space for creative abilities. Well-being covers a diversity of gains that are implicitly interconnected, namely confidence, social connection, and the loss of stress. Participants also indicated that adversities such as personal issues deteriorate well-being, which sets off internal stress that leads to a lack of happiness that often results in a lack of creativity.

4.1 Improved Social Ability. Some participants speak about powerful stories on the change of mentality and character they encountered after experiencing the effects of MDMA, as well as admitting that they benefit creatively from being able to socialize with bare hardship.

> *Like what I said, I think creativity is there. But how do you nurture it or how do you get it out. And that's the personal part. And drugs like ecstasy or MDMA have helped me open myself up, and also let the creativity come out more. I was playing already, but it came out more and it opened me up and it made me more open-minded to a lot of more music. And I could feel it and enjoy it and weigh in.*

(Drugs) opened a lot of social doors for me. Yeah. Because I used to be a little weird. Yeah, it makes me more social and gives me more comfort in social settings.

4.2 Stress Relief. More than half of the participants disclose recreational drug use produces therapeutic effects, specifically on the decrease in stress. Some participants emphasized that stress is one of the most dangerous factors that kills creativity because it tends to fully occupy artists in their creative endeavors.

I think smoking hash helped me sometimes to let go of things and I'm thinking about and being in the here and now, although I have to say that I've also made a lot of music before I smoked and before I did anything more than smoking. There was also no problem. But in those years, I was much more relaxed. I was not so stressed at work. So I guess ultimately you just need to be relieved of stress. And there's many ways to do that. And one of them is smoking hash.

When asked about the ways drugs impact their creativity and life in general, almost all artists indicate implications to happiness, hedonism, self-esteem, self-actualization, and social connection in relation to creative behavior. We therefore propose that the effects of recreational drugs enhance a sense of well-being, giving artists the foundation of mental health to explore their creativity. Furthermore, self-actualization through aids of psychedelic insights is also frequently mentioned, we put forward the finding that psychedelic drug use on occasions may allow users to achieve self-actualization, this, in turn, enhances the sense of well-being, and subsequently enhances creativity.

Theme 5: Socio-political Stance

5.1 Longing for Personal Freedom. All subjects who took part in the study are in certain ways involved creatively in the underground scene of the Netherlands. Without indicating topics of politics and views of society, more than half of the artist participants

actively express their social and political views of drug use and drug policies. Out of those who assert personal views of politics, all participants seem to share consensus on the legalization of drugs, which were supported by valid, logical reasons. In relations to their political views, other participants articulated a free-thinking, free-living way of life among the underground artists. Associations are found with freedom of living, as well as the longing for freedom to provide a creative lifestyle, in which the lifestyle involves drug use. One participant explains that the goal of his work (free tekno event organizer) is not only to have a party, but the goal is also to show people a different way of life, which is a free-living society. Concerning drug use, he states:

> *I think that for recreational drug use, everyone, every person is free to do whatever kind of drugs they wish. And I think what people put in their own bodies is their own personal choice. And I cannot criticize anyone for doing so*.

Another participant describes the current drug laws as conservative, and that there could be more room for creativity to be exerted, he clarifies:

> *I think the Netherlands can be a lot more liberal, concerning drugs. I think it's kind of hypocritical that something is allowed, but still illegal. We used to lead the way there and now, we're even behind America concerning cannabis.*

The result demonstrates the promising effects of recreational substances in regard to artistic creativity. Contrary to the mainstream beliefs, we argue that in the context of recreational use, illicit substances positively and explicitly influence artistic creativity by expanding consciousness, heightening senses, and affecting emotions and mentality. These effects are believed to motivate artists in using recreational drugs. Despite associations drawn by previous studies on psychedelics and artistic creativity, to our knowledge, this study is the first to demonstrate that multi-types of recreational psychoactive substances can enhance the creative behaviors of artists.

In addition to the direct influences that motivate drug use, our findings confirm the significance of well-being and accentuate it as an indirect effect that ultimately enlarges the creativity behavior of artists. This idea becomes increasingly evident when participants disclose that drug use improves social abilities, individual self-image, and relieves stress in personal life, accordingly allowing the headspace to perform creatively (Girn et al., 2020). In addition, psychedelics induced insights contribute to self-actualization, which in effect elevates well-being and the creative process. For these reasons, we propose that drug use in a recreational context promotes individual well-being, and elevated well-being contributes to a more successful creative internal environment for artists.

Distinctively, our findings underscore the value of open-mindedness as an attribute to creative behavior. Established from the interview study and existing literature demonstrating the effects of illicit substances and the association between open-mindedness and creativity (Germann, 2019), we assert that recreational drug use should enhance idea generation, inspiration, uniqueness, and creativity flow. Moreover, content analysis verified that creative behaviors on the effects of illicit psychoactive substances were mediated by open-mindedness, hyperfocus, and new perspectives. Consequently, artists predominately evaluated the causation of creative behavior on account of affected mentality, altered states of mind, heightened senses, as well as well-being generated and elevated by the effects of recreational drugs. Huxley (1954) asserts that psychedelics enable opportunities to appreciate one's life to a greater extent, one may realize and appreciate an "unfathomable, ever-present beauty of the cosmos", and hence transcendence gives meaning to create. One may comprehend, outside the one "self", the connectedness as a collective entity, where an understanding of all knowledge in the universe is made possible, here the incentive of artists' drug use is the enhanced sensitivity towards beauty and reality.

Despite the increasing approval and endorsement in scientific research insofar provided, psychedelic substance use still remains obscure, and drug use widely prevails in underground culture. As described in the creative context, psychoactive drugs delve into unraveling the

association between brain and mind, aiming to break through the mysteries of consciousness, ultimately achieving unrestricted individual creativity, where individuals are liberated from the societal constraints. This serves as an additional finding to this paper, where participants expressed dissatisfaction regarding drug policies and governance considering the benefits recreational drugs have on artistic creativity.

In accordance with literature explored above, particularly the section of letting go and *the eliminative brain*, it was taken into account, nonetheless, that a possible motivation of artists' drug use could be to "run away" from reality, rather than the incentive of striving for greater creative behavior. Substance use may be thought to numb one's mind and body. Therefore, the assumption that the initiation of artists' creative endeavors may be a process of escapism, potentially forming addictive behaviors. Rather than stimulating creative behavior, the consumption of psychoactives may account for avoiding personal responsibilities, or escaping adversities, and inter alia. On this basis, drug use subsequently acts as a risky and rather temporary tool to escape reality and/or to cope with setbacks or predicaments respectively. It is worthy to note that we do not promote substance use in said context, and instead, we consciously acknowledge these behaviors to be unhealthy and highly addictive.

Future Research

In relation to future research, it would be fascinating to explore the concept of "madness" and its relationship in artistic creativity (e.g. mental abnormalities/ disorders) In fact, multiple findings in the interviews point out that mental pain and suffering generate extraordinary art. Huxley (1923) also indicates "Perhaps it's good for one to suffer. Can an artist do anything if he's happy? ...What is art, after all, but a protest against the horrible inclemency of life?" (p.40). Furthermore, likings of dystopia and self-destruction were found as consistent ideas throughout the interviews in the present study. Moreover, data also reveals that recreational drugs, specifically stimulants enhance the focus of many artists because of their

ADD and ADHD. Numerous journals suggest that genetics or nurture developments of severe mental illness can be linked to the personalities of brilliant artists and writers (Greenwood, 2020). Taken into account the exceptional Dutch artist Vincent van Gogh, who was plagued by psychiatric illnesses such as manic depression throughout his life. And the famous French sculptor Auguste Rodin, who suffered from schizophrenia. Similar circumstances that had detrimental consequences include artists and writers such as Ernest Hemingway, Jean Genet, Michelangelo Merisi da Caravaggio, and etc. These sorrowful phenomena of artistic individuals spark intrigue to explore questions such as: Is it arbitrary or that madness is in specific ways to be associated with genius, creativity, or artistic capabilities? What are the underlying processes of mental abnormalities that contribute to artistic creativity?

Strengths and Limitations:

The strength of this research lies in the methodology of a qualitative study, where in-depth analysis, as well as an exploration of perspectives of creativity among underground artists and recreational drug use, is provided. Nonetheless, a number of limitations should be taken into account. Firstly, participant bias may have impacted the results, because artists who were motivated to take part may have been because they obtain strong feelings about recreational drug use. Remarkably, all participants articulated mainly positive opinions on the use of drugs in this population, despite expressing heavily negative experiences in the time of drug use. With the intention to collect a range of perspectives, the research aimed for diversity in gender, work type, age, and geographical location; nevertheless, most interviewees were based in the underground environment, therefore findings application in relation to other types of arts are limited. It is acknowledged that certain perspectives may have been left out, and that interpretation of researchers may be incorrect, despite that the recruitment of participants continued until no new codes could be generated. On another note, the diversity in the population was found to be impacted differently by the type of creative endeavors that artists

do, therefore data may be incoherent regarding the impacts of drug use on their creative process.

Secondly, Specific artist interviewees were greatly influential to the underground culture, particularly in the music domain. Therefore, it was presumed that most valid responses could be pertained, by means of the proficient knowledge and experiences that they possess. However, despite their outstanding artistic competence, some artists may, to a certain extent, lack the ability in expressing their thoughts and processes. Nonetheless, most responses contributed insightful and fruitful findings. In addition, this limitation is categorized as a random bias, because if the interviews were to be conducted with expressive academics, the art-relevant findings would be significantly insufficient.

Thirdly, the interviewer was relatively inexperienced in conducting semi-structured interviews. Looking back at the transcript, wording bias and nudging may have been involved in the data collection process. It is notable that at times she focused on less relevant topics at lengths, thereby encountering difficulties in diving into the core during a limited time. Concerning nudging, the interviewer often attempted to suggest the meaning of answers, which may have had manipulation effects of the authentic responses of the interviewees. Overall, interview techniques could be further improved to yield more meaningful and substantial results, such as allowing participants to complete their sentences before moving on to subsequent topics. Fourthly, the sample population in the study is arguably small regarding the size. This means that the subject pool may not be representative of the Dutch underground artist population.

Finally, the study recognizes that the opinions of artists in other countries may differ, as appreciation and support for recreational drug use varies by the educational information that is provided to the general public, depending partly on its legality. Finally, despite the awareness of professionalism, personal stance may have been affecting research objectivity. This paper is

written through an overall positive lens, as the researcher experienced various benefits from drug use, including profound self-discovery, reduced depression symptoms, social connection, and hedonism. Moreover, she also advocates that drug legalization ought to bring out better outcomes on society. By considering that depending on personal and situational circumstances, the risks and dangers of recreational drug use are largely present, the paper sought to gain objectivity.

Conclusion

The paper presented highlights the perspectives and experiences of underground artists with recreational drug use for its impacts on creativity, illustrates that the effects of illicit, recreational substances can have far-reaching consequences on artists' creative behavior and enhance artistic creativity. In addition, a knowledge gap of cultural values and scientific, objective understanding of drug use is provided. Our findings propose two conclusive remarks: First, recreational drugs can stimulate the creative process at faster and more effortless rates. And second, (illicit) psychoactive substances can generate unique brain connectivity, ultimately increasing the potential for artistic creativity. Since a lack of research have been carried out to investigate the motivations of drug use on artistic creativity, and the beneficial effects of psychoactive substances, our findings add to existing literature and denote that recreational drug use does not only pose health risks and crimes (which in general is displayed as societal and cultural stigma), but also contributes positively to artistic creativity, in particular to the Dutch underground scene. The advantages of currently illicit substances in artistic creativity should be acknowledged on a wider basis and incorporated into the education of the general public. Furthermore, our findings hope to shed light on further psychology and anthropology research by identifying the relevance of well-being (social skills, self-esteem, self-transcendence, and stress relief) to the creative behavior and process in art. Provided the scope of studies limited in measuring functional creativity, we position that our findings on artistic creativity should be further investigated to arrive at a consistent pattern. Because of this, we propose that

further sophisticated results on the topic of interest should be in the context of culture, peer influence, and nurture environments. Underscore the importance of creativity, this paper finalizes by a quote elucidated by philosopher Albert Camus as the intention to inspire our readers: “Men must live and create. Live to the point of tears — as when standing in front of this house with its round tiles and blue shutters on a cypress-planted hill.”

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Appendix 1

Interview Question List

1. What is your definition of creativity?
2. How did you get into what you do creatively?
3. What stood out in your personal life which influenced you to choose your career?
4. What do you do to enhance your creativity?
5. Can you tell me about your views on recreational drug use?
6. Do you use drugs while you are in your work process? What is that like?
7. Has any type of substance helped to enhance your creativity? If so, which one?
8. Could you further describe how the use of drugs impacted your work in art/music/photography?
9. During your creative process, whether under influences or not, can you describe where 'you' are in it? Or even, is there a you?

- Sub question→ Is there a difference of 'the self/ ego' between being sober and under influence while you are creating your work?
- Sub question → what does this mean to you?

How much are you aware of yourself during your creative process?

10. From where does your creativity stem (your emotions, your personal experience, etc.)?
11. Tell me about what you do to get into your creative zone?
12. As a creative individual, do you believe that you perceive the world differently from other people? Do you think that any "unusual" thought processes are involved when you create something?

13. What is the most creative idea or project you have generated as an artist/musician/photographer? How was it received? Were drugs involved?
14. Do you think spirituality and culture play a role in your creativity? (Explain).
15. What role do drugs play in your creative process?
16. (For certain work) How is your idea derived - in a moment, from a voice, during an out-of-body experience? Or does the idea come when something or someone else is influencing you?
17. What was the biggest opposing force that you encountered on your creative journey?
18. What role do you think the western culture plays in the creative efforts of artists? Is that the way you feel too?
19. Do you think there are traits that creative people have as compared to people who are not creative? (Does that go the same for you?)
20. Do you think there are traits that drug users have that make them more creative?
21. What do you think about the commonly held notion that creativity is linked to madness?

Appendix 2

Table 1

Codebook and Question Aimed to Collect According response

Overt Measures	**Main Theme**	**Sub theme (codes)**	**Descriptors**	**Source of Data**
	1. Affected emotions and mentality	1.1 Open-mindedness	Disclosure of drug use brings users to be more open-minded,	Q1 – Q7, Q17, Q25, Q26

			implying curiosity and exploration.	
		1.2 Expressiveness	Convey of emotions into art	
		1.3 Prudence	Cautious about drug use and aware of its risks and negative consequences	
	2. Heightened senses	2.1 Increased focus	High motivation. Being in the zone. Greater motivation of task completion, decreased difficulty in technical tasks and performance.	Q8, Q10 -15, Q20

		2.2 Sensitivity to details	Increased awareness and attentiveness, and idea connectivity in subtle, trivial items and experiences.	
		2.3 Flow	The mental state of being completely present and fully immersed in a task. Experiencing energy and atmosphere (vibe)	
		2.4 Brain connectivity	Effortless linkage between unique ideas	

	3. Altered states-of-mind	3.1 New perspectives	Change of standpoints in ideas and generation of uniqueness. Including ideas generation visualised during hallucination.	Q9 – Q14, Q20, Q22
		3.2 Enhanced content understandings	Indication of deeper understandings of the artistic and musical concepts through drugs	
	4. Drug use influence	4.1 Yes, causation	Personal experience of positive drug impacts on creative behavior	Q8-Q20

		4.2 No, causation	Reject the presumption that there is cause-and-effect -relationships between drug use and creative behavior	
		4.3 Some causation	Briefly confirm there is an association, but drug use is not a motivator to enhance creative behavior	

Covert Measures	**Main theme**	**Sub theme**	**Descriptors**	**Source of Data (from question list)**
	5. Culture	5.1 Hedonism	Pleasure acts as the main motivation of	Q9, Q23,

			drug use and creation	
		5.2 Collaboration	Working together with others to create, resulting in increased creativity, where drug use is present.	
		5.3 Role model	Observational learning resulting knowledge and experience gain	
		5.4 Homogeneity	Similar values and characteristics. Strive for freedom and freethinking Shared-passion of creating, instead of commercialism, which makes up a creative atmosphere in the	

			underground community	
	6. Well-being	6.1 Improved social skills	Drug use has enabled better communication in social situations	Q6, Q7, Q11-Q12
		6.2 Confidence	Impact of drugs in improved self-esteem. Comfortable to perform and communicate. Dare to take risks in creative behavior	
		6.3 Self-transcendence	Insights gained through drug use, leading to more understanding of self.	Q8

		6.4 Stress relief	Coping. Drug use generates therapeutic effects, leading to enhanced ability to create. Unwinding	
	7. Socio-political standpoints	7.1 Opposition governance	Striving for change in drug regulations and policies. Feeling of limited freedom	Q9, Q24
		7.2 Neutral experience	No comments on governance and policies	
		7.3 Satisfaction governance	Grateful and content with current drug regulations	

Appendix 3

Table 2

Themes and Illustrative Quotations (Elliot et al., 2020)

Theme	Subtheme	Quote no.	Participant identifier	Illustrative quotations
1. Affected mentality and emotion	1.1 Open-minded ness	1	Artist 1	" I think the openness to experience is very important in being creative. Everything is a remix. The more new input you have, the more you can work with, the more the total sum of your brain is, basically."

		2	Artist 3	" When you consider creativity or link it to madness, I think that's a very narrow minded view. Yeah. Like putting people in boxes. Categorizing them. And well, I don't want to do that. Very much like nonjudgmental, open minded and respectful... And I think that's how it should be."
	1.2 Ease of expressiveness and transforming thoughts into creations	3	Artist 10	"What I show with my art and stuff.. Not the dark side, (but) a drug side of people... You know? Maybe to give the people a look inside of my mind."
		4	Artist 10	"Almost all things that I do, it is connected to techno (music genre). (The visuals are)my translation of the music I want to express.

		5	Artist 7	" I think every aspect of creativity has to do with who you are and what you are expressing. And in my case, for creating lyrics. It has to do with my vocabulary and how I mastered the language really well."
2. Altered states of mind	2.1 New perspectives formation	6	Artist 5	"I noticed that the mind high that comes mostly with LSD and the way in which your brain makes more random connections. It allows me to see more options because when I work from a painting, what I like to do is start with something random. And then from that randomness to see what the possibilities are in there and then draw those out of the painting. ... And when I'm on LSD, I can see more of the options. I can think of more options

	7	Artist 3	“Mostly my work is so centered on self-destruction, you know, everything comes with a price. And when I do shrooms, then I experience my art when it is all, um, I don't know, more personal, more involved. More positive thinking, not self destruction but positive thinking.”
	8	Artist 2	“When I am on Ketamine, my mind really gets introspective. So I'll be painting and it will be put slightly out of that zone because I'm overthinking a lot in myself, It's usually more deeper thought that uses the psychedelic effect to get more insights. And I noticed that I can with ketamine, I have an easier time on ketamine to zoom.” .”

3.	Heightened senses	2.2 Hyperfocus	9	Artist 2	“It gives me the hyperfocus. And with speed just gives me just a normal flow of things, like more of heightened senses.”
			10	Artist 8	“And it's really repetitive. You have to hear it over and over and over. And if you yeah. You might be distracted more easily If you haven't taken amphetamines, for instance, or other kinds of drugs that really make you focus.”
			10	Artist 4	(on LSD) “It's like maybe I have to spend a week to fix this shit, but that's hard. Because after that, yes, I can focus on something else. So that's one thing I did. And I think another thing it's like also just showing me what's possible.”

		11	Artist 10	“And also speed hyperfocus. It keeps me focused all the time. When I am VJing, it's sometimes eight, nine hours straight, but you have to make shit and have to get into the music.”
	2.3 Daring execution	12	Artist 1	In a positive way. Because then I will loosen up a little bit and feel a little bit more free or daring. Tried to do some tricks. Well, sometimes I do techniques where (normally) I wouldn't have dared but oh. Oh well having a couple of beers. And you're really into it and you're not scared to make a mistake or.

	2.4 Task completion	13	Artist 10	“I finish things with drugs. Yeah. Yeah. When I started the project. Most of the time I feel insecure. I think man, what am I gonna do. Thinking too much, having high expectations. I take drugs and then all those feelings are gone. And then I just do.”
		14	Artist 7	“Creatively I think amphetamine is very useful if you already have an idea and you just need a little help and the motivation to execute it. It's great.”
		15	Artist 7	“But that's kind of good for the last difficult half of creation with the finishing up. I mean, I always have the first strokes of an idea that's always the easiest for me. But the effort it takes to polish it into a finished end product, that's. Well, you need a lot of motivation for that. And to me, amphetamines can help there.”