The hyperassociative mind: The psychedelic experience and Merleau-Ponty's "wild being"

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Purpose: In contemporary phenomenology, Dieter Lohmar has suggested that the new task of phenomenological research is to analyze the "alternative representational systems" of fantasy. In line with this program, we propose that psychedelic experience could also be suitable subject to this project subsumed under the wider category of fantasy activity. The aim of this paper is to show that psychedelic experiences offer a favorable situation to study the imagination. Method: The paper applies the conceptual framework of the late Merleau-Ponty, developed in The Visible and the Invisible, using his mescaline analyses which have been elaborated in The Phenomenology of Perception. Results: We demonstrate that psychedelic visions and emotional states can be discussed within the Merleau-Pontian framework of "wild world." From the viewpoint of phenomenology, we suggest that psychedelic visions represent an ongoing sense-making and Gestalt-formation process in which the role of the elaborative activity of the subject is crucial. These - often unsettling - visions show the basic volatility and ambiguity of perception and fantasy, which also sheds light to the hidden schemes of perception, thinking, and emotion of normal consciousness. Conclusions: Freud claimed that dreams are "the royal road" to the unconscious. In an analogous manner, while dreams were the primary psychoscope to the unconscious of psychoanalysis, in contemporary phenomenology psychedelic experiences may show a possible way to an another kind of unconscious, the phenomenological unconscious. This unconscious comprises the hidden schemes and basic affective emotional attitudes of the knowing subject.

Keywords: phenomenology, Merleau-Ponty, "wild world", psychedelics

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INTRODUCTION

In philosophy and psychology, there exists a more than a century-old history of psychedelic self-experiments. Both in psychology and philosophy, it was James (1882, 1902/2009) who, back in the 1880s, acted as a pioneer when it came to research into psychedelics (see Tymoczko, 1996). His interest lay in how psychedelics could potentially intensify fantasy, especially religious imagination. In the 1920s, psychiatrists and *Gestalt* psychologists began to examine how mescaline could affect perception. During the 1930s, Benjamin (1927–1934/2006) (see Wolin, 1994) and Bloch (1954–1959/1986) tasted hashish, Sartre (1978) tried mescaline, and Maurice Merleau-Ponty followed his path a decade later. Bergson (1896/1999),

Marcuse (1969), and Foucault (1970) also proposed psychedelics as a reasonable means to expand the limits of the mind, albeit Bergson never used them (see Sjöstedt-H, 2015). In The Varieties of Religious Experience, James declares "that our normal waking consciousness [...] 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" (James, 1902/2009, p. 349) ["I myself made some observations on [...] nitrous oxide intoxication, and reported them in print. 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

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filmiest of screens, there lie potential forms of consciousness entirely different" (James, 1902/2009, p. 349)]. But what are these "entirely different forms of consciousness" like? And why do they deserve the attention of psychologists and philosophers? In this paper, we aim to argue that being under the effect of psychedelics, one can reach a state of mind, which may be favorable when it comes to phenomenological research into perception and imagination. What once were dreams to Freud, today might be the psychedelic experience to phenomenologists and psychologists with a taste for phenomenology. In the past one-and-a-half decade, a new wave of psychedelic research has begun in philosophy. There is a handful of researchers analyzing psychedelic experiences using the frameworks of Edmund Husserl and Maurice Merleau-Ponty (Horváth & Szabó, 2012; Horváth, Szummer, & Szabo, 2017; Lundborg, 2012; Shanon, 2001, 2002, 2003; Szabo, Horvath, & Szummer, 2014).

THE LIMITS OF PERCEPTION IN NORMAL WAKING STATES OF CONSCIOUSNESS

The deceptive idea that objects and things are provided in a fixed and ready way and that perception is a passive process is not merely due to a false naturalist epistemology or the naiveté of the normal everyday consciousness. One has to admit that perception in a normal waking state of consciousness does resemble the above: stereotypes, monotone routines confined by rigid categories. Dayto-day life requires swift and mechanical processing of information as well as routine-like decision-making and behavioral answers to different situations. However, because of this, the original richness of the experience becomes scarce or even disappears altogether. Thus, perception turns into a resigned act of enumeration of the finished and already understood things. However, this finished state of things and the passivity of perception is – as Merleau-Ponty (1962, 1968) puts it – only an illusion. How could we make our everyday way of perception free of its self-righteous confidence? Is there a way to unlock the ever-frozen things from their plenitude and positivity? With Merleau-Ponty's words: "[...] the question: how can one return from this perception fashioned by culture to the 'brute' or 'wild' perception? What does the informing [of culture] consist in? By what act does one undo it (return to the phenomenal, to the 'vertical' world, to lived experience?)" (Merleau-Ponty, 1968, p. 212). The aim is to "subject our perception of the world to philosophical scrutiny," but we cannot do it "without ceasing to be identified with that act of positing the world, with that interest in it which delimits us, without drawing back from our commitment which is itself thus made to appear as a spectacle [...]" (Merleau-Ponty, 1962, p. 253). The normal waking state of consciousness makes this "drawing back from our commitment" an almost impossible task. Though there are some ways of observation that could potentially open up ways to the original openness and potential richness of the experience, covered and incapacitated by the routines and sedimented forms of normal waking consciousness. Psychology and philosophy use at least

four kinds of observational methods and situations. First, there is the examination of visual perception in Gestalt psychology; second, we find Freud's way of using dreams as a radically different state of consciousness; then there is the observation of human imagination in a normal waking state of consciousness or daydreaming in a slightly altered mental state; last but not least, we have the radically altered states of consciousness which are induced in a chemical way using psychedelics.

FOUR WINDOWS TO THE UREMPFINDUNG: AMBIGUOUS FIGURES, DREAMS, IMAGINATION, AND PSYCHEDELIC VISIONS

During the beginning of the 1910s phenomenology, Edmund Husserl's new philosophy, greatly inspired Gestalt psychologists. By the time Husserl proposed his ideas, some of these psychologists already had good knowledge in philosophy. These experts managed to create experimental situations that could empirically corroborate the phenomenology of Husserl. The most spectacular and promising experiments exploited the visual effects of the ambiguous figures. These figures are balanced in our visual perception in a sophisticated way so that perception alternates between two equally "strong" Gestalts. The subject switches from one Gestalt to the other in 10–20 s intervals, for instance, one sees a rabbit that is quickly transforming into a duck. During this experience neither the figure nor the position of the person changes. The ambiguous figures, the Müller-Lyer illusion and other special visual effects in the experiments of Gestalt psychologists, prove that - in Merleau-Ponty's words - "the perceived, by its nature, admits of the ambiguous, the shifting, and is shaped by its context" (Merleau-Ponty, 1962, p. 9). The experiments of Gestalt psychology greatly affected a handful of eminent philosophers. Husserl spoke highly of the works of two Gestalt psychologists, Oswald Külpe and Karl Bühler. In the 30s and 40s, Wittgenstein and Merleau-Ponty realized that the ambiguous figures are not some strange and exotic types of perception but actually shed light on how perception works; these figures proved that – just as Husserl proposed earlier – perception determined by the object is merely illusion. Behind this illusion hides a vibrant dynamics where the subjective and objective sides of perception intertwine.

More than one decade before Gestalt psychology appeared, Freud had already drawn attention to how dreams could be a very fruitful way of observation for psychology. The dream, as stated by Merleau-Ponty, is a bodiless existence "without 'observation' or rather with an imaginary body without weight" (Merleau-Ponty, 1968, p. 262) ["/.../understand the dream starting from the body: as being in the world (l'êtreau monde) without a body, without 'observation' or rather with an imaginary body without weight" (Merleau-Ponty, 1968, p. 262)]. The dreamer is freed from the monotonous tasks of waking life and thus is no longer obliged to use the rigid categories of waking perception. These routines – as stated above – are for quick, effective, and mechanical decision-making but at the same deprive experience from its potential sensual richness. Freud

thought that dreams were the royal road to reach behind the facade of consciousness, later Jung, Bergson, Ludwig, Binswanger or even the contemporary Daseinanalysis followed Freud's footsteps in using dreams to achieve the same. But their concept about the unconscious greatly differs from Freud's, which, by the way, as Rudolf Bernet points out, holds pretty heterogeneous concepts together (Bernet, 1997). Dreams, however, have their own limitations when we look at them from the perspective of phenomenological analysis. A classic phenomenological investigation always begins from the viewpoint of reflecting consciousness and it puts the psychological paradigms in parenthesis (including and especially the problem of unconsciousness). Is it possible to analyze dreams phenomenologically? This kind of analysis demands the operation of the reflexive consciousness of the subject. In dream state, it is almost impossible to maintain the functions of the reflexive consciousness. In case of lucid dreaming, the required awareness is present to sustain "reflective seeing," however in the normal channel of dreaming this awareness is mostly missing (Hobson, 2007, p. 110). Another problem is that, for an unexperienced (lucid) dreamer, it is difficult and unpredictable to recall dreams.

In psychological analysis, the psychedelic experience is often compared with dreams and fantasies. At the same time, fantasy in itself is slowly becoming an important topic of contemporary phenomenology (Horváth et al., 2017; Lohmar, 2008, 2010; Richir, 2004; Ullmann, 2012). Ullmann argues regarding imagination: "it occupies a temporary space between the raw and shapeless impression of sensory input and the intentionality of conceptual meaning" (Ullmann, 2012, p. 146). He proposes that imagination may have a similar significance as intentionality or time consciousness when it comes to basic functions of consciousness. As Merleau-Ponty (1962, p. 308) says about hallucinations and imagination:

"The world is the vague theatre of real objects on the one hand and individual and momentary phantasms on the other. It takes in without discrimination real objects on the one hand and individual and momentary phantasms on the other - it is an individual, which embraces everything and not a collection of objects linked by causal relations. To have hallucinations and more generally to imagine, is to exploit this tolerance on the part of the antepredicative world, and our bewildering proximity to the whole of being in syncretic experience." (Merleau-Ponty, 1962, p. 308)

Following Merleau-Ponty, Ullmann (2012) points out that a vast part of our waking life is, basically, a volatile fantasy which works together with our perception and memory. In contemporary phenomenology, Dieter Lohmar has suggested that the new task of phenomenological research is to analyze the "alternative representational systems" of fantasy (Lohmar, 2010, p. 176). In line with this program, psychedelic experience could also be a suitable subject of this project subsumed under the wider category of fantasy activity [Edward S. Casey contends that fantasy in itself is probably an indefinable concept because of its polysemy. The volatile experiences of daydreaming and reverie, for instance, can be seen as forms of fantasy, but this may occur and overlap with nearhallucinatory experiences as well (Casey, 2003, p. 79). To our

opinion, it is true that we could speak of the wide spectrum of fantasy activity, but it is crucial to see that there is a sharp line between fantasy-activity and the sense of reality].

THE FOURTH WINDOW: THE PSYCHEDELIC **EXPERIENCE**

Gestalt psychologists observe their subjects in their normal waking state, but the situations in which they are put into are out of the ordinary. The psychonaut's state of consciousness is radically different from the normal waking one. After ingesting an adequate amount of psychedelic substance, the user goes through powerful cognitive and emotive changes. Perception and imagination – modulated by psychedelics – become more vivid and full of life. It is of great importance whether the subject goes through the experience with open eyes or blindfolded. When the user experiences a trip with eyes open, the effect usually consists of the distortion and, at the same time, enrichment of perception. This experience can be characterized by heightened esthetic appreciation and flood of associations, sometimes even synesthetic transfiguration of perception. If the psychonaut goes through the experience blindfolded then the trip usually consists of visions. Psychedelic visions are not psychotic hallucinations, users often find them enjoyable, uplifting, fulfilling, and inspiring experiences in spite of their frequently and shockingly transformative aspects. Ideally, the subjects are often happier and find themselves in a better physical shape after the sessions (Shanon, 2003, p. 165). Characteristic features of the visions are the intense affectivity and extraordinarily vivid imagination. Furthermore, the experience is frequently accompanied by intellectual ruminations and realizations. The contents of the visions are monstrously heterogeneous. The range of the accounts expands from playful and frivolous fantasies (e.g., users see cartoonish figures or characteristic images of pop art) to numinous or unsettling themes of other worldly journeys (Shanon, 2003, p. 96). Inside the mind of the user, new meanings, metaphors, analogies, and symbols begin to form in an unpredictable and spontaneous way. Everyday objects may be saturated with deep significance and with mystical connotations.

The phantasmata (hyle or sensual material) of psychedelic visions are not only a volatile, obscure quasi-sensual experience, rather an intensified multimodal experience. Mostly clear and organized patterns form, which can easily be recalled after the initial experience. At the same time, as Benny Shanon proposes, the narrative structure of visions are not so complex as those of dream narratives:

"By and large, it seems to me that structurally they are less complex than the narratives of dreams. Overall, what makes ayahuasca visions impressive is their magnificence, grandeur, supernaturalness, and the psychological and spiritual impact they have on their viewers. Only a relatively small number of the visions in my corpus of data define multi-unit, complex narrational *structures.*" (Shanon, 2003, p. 110)

Shanon proposes that in considering the nature of psychedelic visions, a conspicuous paradox that appears is that

visions compel a "perceptual belief" (and strong feelings or illusions of acquiring knowledge) to the subjects. By means of this latter curious fact, we arrived to the function of hyper-reality. Shanon accepts the notion that visions are hallucinations, however, he emphasizes that they are *special* kinds of hallucinations which are not only able to rivalize with perceptual objects but the experience feels "more real than real" for the users. Following Merleau-Ponty (1962), Shanon says that in normal life we do not doubt our perceptual contents; when stimuli reaches the eyes - and generally our bodily presence – then we promptly immersed into the world. "Normal human beings do not doubt that what they perceive is real. In a fashion, the act (or rather, the existential state) of perception forces itself upon us and the moment we open our sensory faculties we are immersed in the world of our perception without any choice or room for doubt, like fish in water" (Shanon, 2003, p. 165).

If we examine the first personal accounts, we can see that users describe the visions as special kinds of perceiving. Shanon refers this phenomenon by the term of "perceptual belief."

Michael Winkelman regards visionary states as deriving from the low-level system of cognition under the languagebased high-level system. Anthropological studies suggest, it is very likely that psychedelic visions ("presentational symbolism" in Winkelman) are a common factor in shamanic trance and in psychedelic experiences (Winkelman, 2011a, p. 166). Winkelman proposes that visionary experience – with a psychointegrative function of consciousness – is the fourth mode of consciousness after wakefulness, rapid eye movement sleep, and dreamless sleep. Psychointegration means a peculiar problem-solving activity in which the affective states of the subject are attuned with the community; thus, visions are often the symbolic-imaginative representations of social conflicts and emotions (Winkelman, 2011b, p. 35). As opposed to Winkelman, Shanon does not consider their symbolic aspects. In case of visions, argues Shanon, there is no necessity to decipher hidden meaning, visions have intrinsic meaning and sense for the subject.

Based on the abovementioned, one can say that it is enormously difficult to find the right place of the visionary experience among the multifarious system of intentional acts. Certain aspects of psychedelic visions are not far from ordinary perception, whereas other aspects are overlapping with normal everyday fantasy (imagination). Seeing from this perspective, this kind of "hybrid experience" is a special conundrum. Thus, the psychological and philosophical potentials of the phenomenological research into psychedelic experience are rooted in this very - hybrid - nature. This special variety of altered states of consciousness possesses and integrates the variability of the imagination of normal waking consciousness and some of the vividness and sharpness of the normal perception (see Shanon, 2003). Due to this duality, psychedelic fantasies – compared with regularly occurring ones – are relatively stable and less likely to slip away as well as are easier to recall. This is crucial for a phenomenological project since, in the psychedelic state, it is impossible to maintain the intentional structures and functions of reflexive consciousness. At the same time, as mentioned, the phenomenological analysis demands the operation of the reflexive consciousness of the subject.

THE INTERPRETATION OF MESCALINE EXPERIENCE BY MERLEAU-PONTY

It is very difficult to understand the nature of the psychedelic experience within the traditional elementary framework of perception. Merleau-Ponty developed a radically novel, anti-Cartesian way of looking at perception in The Phenomenology of Perception. Through this new approach, we can better understand the exotic character of the psychedelic experience. Merleau-Ponty questions the objectivist and analytic view of perception. He refuses the model according to which the knowing subject has to synthesize the meaning of the object from the raw "sensory data" in a bottom to top manner, in a vague and mysterious way. Some of the formulations of The Phenomenology of Perception anticipate the ontology of his post-humus work, The Visible and the Invisible [Merleau-Ponty (1962, p. 210) quotes Herder: "Man is a permanent sensorium commune, who is affected now from one quarter, now from another." Then he adds: "My body is the fabric into which all objects are woven, and it is, at least in relation to the perceived world, the general instrument of my 'comprehension."], indicating toward a phenomenological concept of the unconscious (Merleau-Ponty, 1962) ["The disturbance does not affect the information which may be derived from perception, but discloses beneath 'perception' a deeper life of consciousness," writes for instance related to hallucination Merleau-Ponty (1962, p. 253)]. For these purposes, it is important to stress that while banishing the elementarist views of perception, Merleau-Ponty argues, among other things, as the following: (a) perception is in its original form a multimodal and synesthetic process, thus different sensory channels are not separated: we perceive with the whole of our being; (b) the instrument and medium used for experiencing is the phenomenological body (Leib); (c) the boundaries of the Leib are not equal with those of the biological body (Körper); the outlines of the Leib are intruding into the physical environment of the Körper; (d) perception is a process, it has a time dimension: it happens not in a flash, but over time and is affected by experience(s) happened in the past; and (e) the Euclidean concept of space is an artificial construction which is not provided as a phenomenon for consciousness; in fact, the exploring activity of the phenomenological body creates the sense of space for the subject. Merleau-Ponty displays the viability of his theory of perception by bringing up perceptual situations where the elementarist views have failed before. These examples are drawn from analyzing the perception of the everyday environment in a normal waking state of mind, and also from the works of Gestalt psychologists (Koffka, Wertheimer, and Gelb) and existential psychiatrists (Jaspers, Minkowski, and Binswanger). In some instances, he uses different authors' descriptions on mescaline. Merleau-Ponty refers to the mescaline experience in The Phenomenology of Perception in three different contexts, namely, those related to the phenomenon of hallucination, the sense of space, and the phenomenon of synesthesia. To our mind, the French philosopher, by labeling it as psychotic hallucination, fundamentally misunderstood the

mescaline trip. (Later we shall speak about the essential differences between a psychedelic trip and a psychotic hallucination.) Therefore, this aspect of the topic will not be discussed here. However, we suggest that the distortion of the perception of space and the phenomenon of synesthesia are relevant for us. In the following paragraphs, we will focus on these.

Merleau-Ponty proposes that the entity called "space" in physics and everyday language, that is the concept of the Euclidean space, is but an artificial construction, a result of speculation and abstraction and not something that is provided as a phenomenon for consciousness. What, on the other hand, is provided is the environment opened up through the phenomenological body and experience influenced by the background of perception and the past of the perceiving subject:

"An initial perception independent of any background is inconceivable. Every perception presupposes, on the perceiving subject's part, a certain past, and the abstract function of perception, as a coming together of objects, implies some more occult act by which we elaborate our environment." (Merleau-Ponty, 1962, p. 253)

Because of the false self-reflection of naturalist science and the routines of everyday life, the constructive activity of the phenomenological body (Leib) and the topological nature of space (by the Leib) is hidden from us. Mescaline makes the constructing activity of the phenomenological body visible in a negative way: it suspends the organizing activity of the Leib, so the spatial relations of the subject are becoming distorted. As Merleau-Ponty says

"Under mescalin it happens that approaching objects appear to grow smaller. A limb or other part of the body, the hand, mouth or tongue seems enormous, and the rest of the body is felt as a mere appendage to it. The walls of the room are 150 yards apart, and beyond the walls is merely an empty vastness. The stretched-out hand is as high as the wall [...]." (Merleau-Ponty, 1962, p. 253)

To Merleau-Ponty's opinion, these peculiar feelings are due to the fact that under the effect of mescaline the phenomenological body (Leib) degrades into a merely biological organism (Körper). To put it another way, the Leib ceases to work as an organizing agent of perception; the Körper cannot hold things and objects together anymore and the world falls apart for the subject:

"[...] certain parts of the body are enlarged out of all proportion, and adjacent objects made too small because the whole picture no longer forms a system. [...] if the world is atomized or dislocated, this is because one's own body has ceased to be a knowing body, and has ceased to draw together all objects in its one grip [...]". (Merleau-Ponty, 1962, p. 254)

Merleau-Ponty concludes that the sense of space is not a certain class of the states or acts of the mind, but "its modalities are always an expression of the total life of the subject, the energy with which he tends toward a future through his body and his world" (Merleau-Ponty, 1962, p. 254).

In The Phenomenology of Perception, one could argue, Merleau-Ponty attributes a dual function to the mescaline experience. On the one hand, as we have seen, he uses it as a mean of highlighting the phenomenological body's constitutive role: if - due to the effect of mescaline - the Leib degrades into Körper, then, space distorts, falls apart for the subject. On the other hand, when describing synesthesia, the mescaline experience becomes a window looking into an inherent, hiding structure of the "primordial experience," of the Urempfindung (Merleau-Ponty, 1962) ["Seen in the perspective of the objective world, with its opaque qualities, and the objective body with its separate organs, the phenomenon of synaesthetic experience is paradoxical" (Merleau-Ponty, 1964, p. 205). So synesthesia induced by mescaline "becomes one more occasion for questioning the concept of sensation and objective thought" (Merleau-Ponty, 1962, p. 253)]. As Katherine Morris suggests, Merleau-Ponty uses the example of the mescaline visions as "a particular type of 'abnormal' experience to shed light on the normal experience" (Morris, 2012, p. 87). Merleau-Ponty quotes Gelb, the Gestalt psychologist: we can "reveal a 'primary layer' of sense experience which precedes its division among the separate senses" (Merleau-Ponty, 1962, p. 252), [When I have taken up the artificial analytic attitude, "at the same time as the world is atomized into sensible qualities, the natural unity of the perceiving subject is broken up, and I reach the stage of being unaware of myself as the subject of a visual field. Now just as, within each sense, we must find the natural unity which it offers, we shall reveal a 'primary layer' of sense experience which precedes its division among the separate senses" (Gelb, Die Farbenkonstanz der Sehdinge, p. 600 - quot. Merleau-Ponty, 1962, p. 252)] then quotes Mayer-Gross and Stein's study pertaining to the effects of mescaline: the experience induced by mescaline is as if one could sometimes see "the occasional collapse of the barriers established, in the course of evolution, between the senses" (Merleau-Ponty, 1962, p. 253) (Mayer-Gross and Stein: Über einige Abänderingen der Sinnestägkeit im Meskalinrausch, 385 - id. Merleau-Ponty, 1962, p. 253). Merleau-Ponty also refers to Werner, who suggests that the theory of perception when subdivided into different senses is progressively less verifiable as natural perception is approached (Werner: Untersuchungen über Empfindung und Empfinden, I, 155 - quot. Merleau-Ponty, 1962, p. 204). This notion of perception subdivided according to the channels of the sense organs is not an inherent experience, but a mere illusion induced by the analytic expectations of the subject. The effects of mescaline suspend this illusion:

"The influence of mescalin, by weakening the attitude of impartiality and surrendering the subject to his vitality, should favour therefore forms of synaesthetic experience. And indeed, under mescalin, the sound of a flute gives a bluish-green colour, the tick of a metronome, in darkness, is translated as grey patches, the spatial intervals between them corresponding to the intervals of time between the ticks, the size of the patch to the loudness

of the tick, and its height to the pitch of the sound." (Merleau-Ponty, 1962, p. 204)

As Monika Langer puts it, in Merleau-Ponty's interpretation the original synesthetic character of the primordial experience "becomes dramatically prominent because the drug prompts its user to suspend that analytic attitude which atomizes the world [...]" (Langer, 1989, p. 77). According to Merleau-Ponty, under the influence of mescaline the primordial experience, the totality and multimodality of Urempfindung is freed from the illusion of perception subdivided into five sense organs (Merleau-Ponty, 1962, p. 205) ["In reality, each colour, in its inmost depths, is nothing but the inner structure of the thing overtly revealed. The brilliance of gold palpably holds out to us its homogeneous composition, and the dull colour of wood its heterogeneous make-up. The senses intercommunicate by opening on to the structure of the thing" (Merleau-Ponty, 1962, p. 205)]. To sum up, we can say that, primarily, perception is not analytical; the perceived things are not constructed from data conveyed through separate channels of sense organs. Merleau-Ponty suggests in Sense and Non-Sense that I perceive with the whole my being:

"For people under mescaline, sounds are regularly accompanied by spots of color whose hue, form, and vividness vary with the tonal quality, intensity, and pitch of the sounds. [...] My perception is therefore not a sum of visual, tactile, and audible givens: I perceive in a total way with my whole being: I grasp a unique structure of the thing, a unique way of being, which speaks to all my senses at once." (Merleau-Ponty, 1964, pp. 49–50)

THE HYPERASSOCIATIVE STRUCTURE OF THE PSYCHEDELIC EXPERIENCE AND MERLEAU-PONTY'S WILD WORLD

The distortion of the sense of space and the disengaging synesthesia are interesting effects of mescaline. Merleau-Ponty uses these phenomena convincingly to support his new look of perception. Still we think, as aforementioned, that the most important psychedelic effect is the boosting of the associative capacity of mind. From this point of view, we can find important parallels between the psychedelic experience and Merleau-Ponty's ontology called the "wild word" or "wild being" by him, albeit Merleau-Ponty did not explicate these parallels. The central thesis of The Phenomenology of Perception was that perception is an active, vibrating, creative process in which the perceiver and the perceived things are intertwined in an intimate way. This radically new theory of perception implies a new concept of being: in this case, Being is open and reveals itself in the process of perception (Merleau-Ponty, 1968) ["The in itself - for itself integration takes place /.../ in the Being in promiscuity" (Merleau-Ponty, 1968, p. 253). "/.../ for me it is no longer a question of origins, nor limits, nor of a series of events going to a first cause, but one sole explosion of Being which is forever. /.../ the universal structure 'world' - encroachment of everything upon everything, a

being by promiscuity" (Merleau-Ponty, 1968, p. 234)]. The Visible and the Invisible could only touch on the subject due to Merleau-Ponty's early death. The style of the late Merleau-Ponty is unusual in philosophy. It lacks the exact definitions and strict usage of concepts sometimes. In spite of this, we think it helps us to understand psychedelic experience. In this framework, Being is unfailingly rich and perception, exploiting the overflowing richness of Being, is an inherently creative activity. The ontology and epistemology of the late Merleau-Ponty represents a theoretical framework presented in a poetic and somewhat obscure way. Merleau-Ponty, among others, applies the concept of the Freudian interpretation, Freud's novel idea of the past wedging in and organizing the present, as well as Husserl's "ray of world" or "ray of the past." Consciousness has to be understood as "rays of the past and rays of the world at the end of which, through many 'memory screens' dotted with lacunae and with the imaginary, pulsate some almost sensible structures, some individual memories" (Merleau-Ponty, 1968, p. 268). While the Cartesian theory proposes that consciousness is something performed out of a sequence of individual Erlebnissen, Merleau-Ponty says that "we are a field of Being" meaning that in every single instance of perception the whole of Being reveals itself in us and by us (Merleau-Ponty, 1968, p. 240) ["The interior monologue – the 'consciousness' itself – to be understood not as a series of individual (sensible or non-sensible) 'I think that's', but as openness upon general configurations or constellations, rays of the past and rays of the world at the end of which, through many 'memory screens' dotted with lacunae and with the imaginary, pulsate some almost sensible structures, some individual memories. It is the Cartesian idealization applied to the mind as to the things (Husserl) that has persuaded us that we were a flux of individual Erlebnisse, whereas we are a field of Being. Even in the present, the landscape is a configuration" (Merleau-Ponty, 1968, p. 240)]. Instead of the cold, geometrical Cartesian-Euclidean concept of being, Merleau-Ponty brings forth the polymorphic and amorphous structure of Being, its exalted promiscuity. Anything existing can be elevated to the point of being the emblem of Being ["/.../any entity can be accentuated as an emblem of Being /.../ it is to be read as such" (Merleau-Ponty, 1968, p. 270)] says Merleau-Ponty relating to the Freudian interpretation in a general sense (Merleau-Ponty, 1968, p. 270). The individual events of perception are differentiations of our belonging to the massive medium of Being itself. This all-embracing medium is the "flesh," a common, intertwining structure, a chiasm of the world and the perceiving body of the subject (Merleau-Ponty, 1968, p. 270) [Perceptions are "differentiations of one sole and massive adhesion to Being which is the flesh (eventually as 'lace-works')" (Merleau-Ponty, 1968, p. 270)]. In perception, it is not synthesis and passive reception that occurs, but the detachment and articulation of the "flesh."

Under psychedelics the psychonaut's boundaries of self begin to dissolve, self-affection intensifies, the phenomenological body merges with the environment and the phenomenological field becomes the background for the ever-forming Gestalts (Huxley's description is a good example: "A moment later a clump of Red Hot Pokers, in

full bloom, had exploded into my field of vision. So passionately alive that they seemed to be standing on the very brink of utterance, the flowers strained upwards into the blue. [...] I looked down at the leaves and discovered a cavernous intricacy of the most delicate green lights and shadows, pulsing with undecipherable mystery" (Huxley, 1959, p. 34). All these changes result in a divergent, hyperassociative working of the mind. As we have said, in our opinion, the temporarily boosted associative capacity of the mind is the most important effect of psychedelics. We suggest that in the psychedelic experience the polymorphic and amorphous structure of Being, the "wild being" reveals itself. In the normal state of consciousness this structure is hidden, because this kind of divergent activity of the mind is maladaptive in a stable environment. A stable environment demands swift, routine-like behavioral answers of the organism for survival. So in normal waking states, perception and thinking are limited by stereotypes, rigid categories. Psychedelics suspend the suppressive effect of the routines of the normal state of mind. Due to this, a flood of meaning can disengage, revealing the structure of "wild world": the orgiastic connections of notions, feelings, bodily sensations, memories, and stimuli from the outside world become metaphors embracing each other.

In our opinion, the hyperassociative, creative dynamism of mind may have an important role in survival. It is a limitless reservoir of creative solutions, vital if the environment changes rapidly and the organism has to adapt to the demands of new environmental cues. Winkelman's theory of the integrative mode of consciousness corroborates our hypothesis. As mentioned above, he proposes an integrative mode of consciousness, a superefficient problem-solving activity in which the affective states of the shaman are attuned with the community, and the visions of the shaman are often the symbolic-imaginative representations of social conflicts and emotions (Winkelman, 2011b, p. 35). Winkelman refers to Vollenweider and Geyer (2001): psychedelics "reduce the sensory gating systems of the lower brain structures, leading to a flood of information into higher levels of the brain." He suggests that it results in an enhanced integration of information from evolutionary ancient structures of the brain into the frontal brain. This integration explains why psychedelic experiences "are often characterised as providing understanding, enlightenment, a sense of unity, oneness with the universe, connection with others, and personal integration" (p. 5).

Grinspoon and Bakalar's classical description about the psychedelic experience is a good example for the increased associative dynamism of the psychedelic mind:

"At deeper levels, drug users may regress to childhood as they relive their memories, or they may project themselves into the series of dreamlike images before their closed eyelids and become the protagonists of symbolic dramas enacted for the mind's eye. Actions, persons, and images in this dream-world or even in the external world may become so intensely significant and metaphorically representative that they take on the character of symbols, myths, and allegories. Loss of self may be experienced as an actual death and rebirth, undergone with anguish and joy of overwhelming intensity." (Grinspoon & Bakalar, 1983, pp. 13–14)

The most known account of the psychedelic experience is Aldous Huxley's essay, The Doors of Perception, which prepared the psychedelic revolution of the 60s. In this essay, Huxley stood for a naïve phenomenological approach: "[...] we must preserve and, if necessary, intensify our ability to look at the world directly and not through that half opaque medium of concepts, which distorts every provided fact into the all too familiar likeness of some generic label or explanatory abstraction" (Huxley, 1959, p. 22). Huxley (1946, 1999) in his essays implies that by the term "to look at the world directly" he means to discover some hidden essence of things. Merleau-Ponty's ontology allows us another possibility. It implies an enormously creative capacity of the mind which makes the subject able to see things without bias or, with Merleau-Ponty's phrase, to return from the "perception fashioned by culture to the 'brute' or 'wild' perception" (Merleau-Ponty, 1968, p. 212). Laurie Spurling says that Huxley's essay "reveals many parallels between perception under mescaline and Merleau-Ponty's descriptions of pre-objective experience at its primordial level" (Spurling, 2014, p. 19) [Spurling quotes Huxley's description of his own sensation of space under the effect of mescaline: "At ordinary times the eye concerns itself with such problems as where? - how far? - how situated in relation to what? In the mescaline experience [...] the mind does its experiencing in terms of intensity of experience, profundity of significance, relations within a pattern [...]" (Huxley, 1959, 5 - quot. Spurling, 2014, p. 19). Then Spurling states: "Here we find an illustration of the distinction Merleau-Ponty makes between perception in the natural attitude, which we understand as occurring in objective space (where? how far? Etc.), and pre-objective perception, occurring in phenomenal space, and where we witness the birth of perceptual meaning and organization (relations in a pattern)" (Spurling, 2014, p. 19)]. We agree. The mescaline catapulted Huxley into an everlasting big bang of primordial experience [According to Merleau-Ponty, the wild world "to be described as a space of transcendence, a space of incompossibilities, of explosion, of dehiscence, and not as objective-immanent space" (1968, p. 216)] – which Merleau-Ponty, using Husserl's term, called Urempfindung (Merleau-Ponty, 1968, p. 216) - the prolific, overflowingly rich world of the "wild being" or "vertical being" (Merleau-Ponty, 1968, p. 220). As it is well known, the title of Huxley's essay came from one of William Blake's prose poems, called The Marriage of Heaven and Hell. Huxley's choice was superb. The great English visionary goes on to say:

"But first the notion that man has a body distinct from his soul is to be expunged; this I shall do by printing in the infernal method, by corrosives, which in Hell are salutary and medicinal, melting apparent surfaces away, and displaying the infinite which was hid. [...] If the doors of perception were cleansed, everything would appear to man as it is, infinite. [...] For man has closed himself up till he sees all things thro' narrow chinks of his cavern." (Blake, 1994, Plate 14)

In the lines above, it is as if Blake describes the psychedelic experience with the help of poetic metaphors. The use of "corrosives" is to free perception up so that one can see things in their full richness, not just "thro' narrow chinks of his cavern." The "corrosive" of mescaline frees perception from the categorization of everyday consciousness, it's blind and mechanical ways of functioning. It is a state of mind in which routines are removed from the primordial perception (Urempfindung), thus "the doors of perception will be cleansed" and the overflowing richness of experience and being comes into the light [To put it in Merleau-Ponty's words: "Say that the things are structures, frameworks, the stars of our life: not before us, laid out as perspective spectacles, but gravitating about us. Such things do not presuppose man, who is made of their flesh. But yet their eminent being can be understood only by him who enters into perception, and with it keeps in distant-contact with them" (Merleau-Ponty, 1968, p. 220)]. [As it was recently demonstrated by the MRI records of Robin Carhart-Harris (2015), the activity of the brain is increased enormously for a couple of hours. Millions of neurons are synchronized in novel ways, building up new and unusual patterns, discharging in different rhythms)]. To put it another way, by means of psychedelics we may actually see the living pulsation of perception at its best, the Urempfindung itself, which usually lies hidden in the background due to the monotonous routines of everyday life. Psychedelics, in the words of Blake, by "melting apparent surfaces away," are able to display "the infinite which was hid." They may shed light on the trans-objective and trans-subjective sphere of the "wild world" - which, according to Merleau-Ponty, can be characterized by the infinity of the openness of the *Umwelt* of the perceiving subject, the everlasting emanation of Being, its inexhaustible richness, bottomless abyss, the "operative, militant finitude" of perception (Merleau-Ponty, 1968, p. 259) ["Forme the infinity of Being that one can speak of is operative, militant finitude" (Merleau-Ponty, 1968, p. 259)].

It is important to see that the psychedelic experience is not a sphere of existence dominated by chaos. As mentioned earlier, psychedelic visions are accompanied by heightened awareness and mental lucidity that are generally the main characteristic features of perception. Psychedelic visions, as we have seen above, are able to combine the variability of the normal waking imagination and daydreaming, some of the vividness of perceiving and the freedom of naturally occurring altered states of consciousness (e.g., dreaming). The pattern of a psychedelic vision is totally different from that of a psychotic hallucination. This difference is related to the basic dilemma that haunts psychedelic research since the beginning: whether psychedelic experience is a distortion, debilitation, and dissociation of the normal waking consciousness, a chemically induced preliminary hallucination, or right the opposite: a richer and deeper way of perceiving reality? Of course, the answer depends on what we mean by reality and perception. In this paper, we applied Merleau-Ponty's theoretical framework. We suggest that the Janus-faced nature of the psychedelic experience comes from the fact that psychedelics enormously enhance the creativity and fantasy activity of the mind. A relatively stable environment requires swift- and routinelike behavioral answers from the side of the organism for

survival. It implies that the enhanced creativity of the psychedelic mind can be in conflict with this demand. In 1947, 2 years after Merleau-Ponty's book The Phenomenology of Perception was published, the Swiss pharmaceutical company Sandoz started to distribute the strongest psychedelic substances of all time - lysergic acid diethylamide (LSD) - to psychopharmacologists and psychiatrists for research. The dilemma mentioned above appeared here, as well. At first, psychopharmacologists thought that LSD induced reversible, quasi-psychotic hallucinations or, in other words, a "model psychosis." But psychiatrists quickly came to realize that a psychedelic vision is not a psychosis-like hallucination, because (a) if appropriate mind-set and setting (environment) is achieved during the experience it usually turns out to be quite pleasurable and is not filled with anxiety; (b) modality is usually visual and not exclusively auditory; (c) a psychedelic vision, as we emphasized, brings an extra layer of meaning, context, and associations flowing to the user: here an almost shocking multimodal flood of meaning occurs; (d) the experience does not induce memory loss; (e) it can be controlled by the subject to a certain extent; (f) the time frame of the experience can be defined (e.g., in cases of mescaline, psilocybin, or ayahuasca, a trip generally takes 3-5 hr, double as much for LSD, 20-30 min for DMT, etc.); (g) psychedelic visions have an integrative potential as opposed to psychotic hallucinations (In South-American indigenous tribes that use ayahuasca, psychoactive plants act as a moral compass for the members of the tribe.) which dissociate the personality of the psychotic individual (Carhart-Harris, 2015; Carhart-Harris et al., 2014; Mishara & Schwartz, 2011; Tagliazucchi, Carhart-Harris, Leech, Nutt, & Chialvo, 2014; Winkelman, 2011b) [Neurological data also suggest a significant difference between psychotic hallucination and psychedelic vision. We know from psychopharmacological research that psychedelic experiences stem from the increased levels of neurotransmitters, specifically serotonin and dopamine, which last a couple of hours. According to recent neurological research (Carhart-Harris et al., 2014; Mishara & Schwartz, 2011; Tagliasucchi et al., 2014), psychedelic substances kick start certain neurosynchronizational and pharmacological mechanisms that actually do not deteriorate information processing, on the contrary, they make the individual able to process information that is normally subliminal and, thus, lost.]; (h) a vision sometimes has the same intensity as perception would, it could only be something like a flower or a pebble, the realness of which we would never question (see Shanon, 2003); finally (i) it brings about a rich esthetic experience.

CONCLUSION

Regarding the discussion above, it is worth considering the relevance of psychedelic experience in phenomenological investigation. In this paper, we approached the psychedelic experience through Maurice Merleau-Ponty's epistemological and ontological concepts. We proposed that the accounts of the psychedelic experience and the descriptions of pre-objective and pre-subjective sphere of "wild world"

or "wild being" by the late Merleau-Ponty reveal the same hyperassociative structure. We classified psychedelic experiences under the wider category of fantasy activity. Adapting Merleau-Ponty's mescaline descriptions and applying the conceptual framework of the ontology of "wild being," we portrayed the potential that lies in researching perception and imagination through a psychedelic experience. We suggested that the most eminent feature of the psychedelic altered state of consciousness is its hyperassociative capacity, a crucial condition for imagination and creativity. We supposed that it has an evolutionary function. We also argued that psychedelics might have the capacity to transcend the habituated patterns and the sedimented forms of our normal waking consciousness. We proposed that the hyperassociative tendencies, eventuated by psychedelic visions, could be seen as the latent schemata or ambiguous and potent Gestalt's germs of imagination as well as perception; they are hiding in the background of mental activity in normal waking consciousness.

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REFERENCES

- Benjamin, W. (1927-1934/2006). On hashish. Cambridge, UK: Belknap Press of Harvard University.
- Bergson, H. (1896/1999). Matter and memory (6th ed.). New York, NY: Zone Books.
- Bernet, R. (1997). Husserls Begriff des Phantasiebewusstseins als Fundierung von Freuds Begriff des Unbewussten [Husserl's concept of fantasy consciousness as a foundation of Freud's concept of the unconscious]. In C. H. Jamme (Ed.), Grundlinien der Vernunftkritik [Basic lines of the critics of meaning] (pp. 277-306). Frankfurt, Germany: Suhrkamp.
- Blake, W. (1994). The marriage of heaven and hell: A facsimile in full color. Dover, NY: Dover Fine Art.
- Bloch, E. (1954-1959/1986). The principle of hope. Cambridge, MA: MIT Press.
- Carhart-Harris, R. (2015). Results: Of a multi-modal neuroimaging study of LSD and a psilocybin for treatment-resistant depression clinical trial. In 54th annual meeting of the American College of Neuropsychopharmacology (ACNP) (pp. S91–S92). Nature Publishing Group.
- Carhart-Harris, R. L., Leech, R., Hellyer, P. J., Shanahan, M., Feilding, A., Tagliazucchi, E., Chialvo, D. R., & Nutt, D. (2014). The entropic brain: A theory of conscious states informed by neuroimaging research with psychedelic drugs. Frontiers in Human Neuroscience, 8, 36-43. doi:10.3389/ fnhum.2014.00020
- Casey, E. S. (2003). Imagination, fantasy, hallucination, and memory. In J. Phillips & J. Morley (Eds.), Imagination and its pathologies (pp. 65-91). London, UK/Cambridge, MA: The MIT Press.

- Foucault, M. (1970). Theatrum philosophicum (D. F. Brouchard & S. Simon, Trans.). Critique, 282, 885-908.
- Grinspoon, L., & Bakalar, J. B. (Eds.). (1983). Psychedelic reflections. New York, NY: Human Sciences Press.
- Hobson, J. A. (2007). Normal and abnormal states of consciousness. In M. Velmans & S. Schneider (Eds.), The Blackwell companion to consciousness (pp. 101-114). Oxford, UK: Blackwell.
- Horváth, L., & Szabó, A. (2012). Integratív tudatállapotok fenomenológiája. Az észlelés és fantázia határmezsgyéjén [The phenomenology of the integrative states of consciousness. On the border of perception and fantasy]. Magyar Filozófiai Szemle, 56(3), 125-150.
- Horváth, L., Szummer, C., & Szabo, A. (2017). Weak phantasy and visionary phantasy: The phenomenological significance of altered states of consciousness. Phenomenology and the Cognitive Sciences, 16, 1-13. doi:10.1007/s11097-016-9497-4
- Huxley, A. (1946). The perennial philosophy (1st ed.). London, UK: Chatto & Windus.
- Huxley, A. (1959). The doors of perception and heaven and hell. Harmondsworth, UK: Penguin Books in Association with Chatto & Windus.
- Huxley, A. (1999). Letter to Mr. Raymond, June 21, 1953. In M. Horowitz & C. Palmer (Eds.), Moksha: Writings on psychedelics and the visionary experience (p. 42). London, UK: Park Street Press.
- James, W. (1882). Subjective effects of nitrous oxide. Mind, 7, 186-208.
- James, W. (1902/2009). The varieties of religious experience. A study in human nature. New York, NY: Seven Treasures Publications.
- Langer, M. M. (1989). Merleau-Ponty's phenomenology of perception. A guide and commentary. London, UK: The Macmillan Press.
- Lohmar, D. (2008). Phänomenologie der schwachen Phantasie (Phaenomenologica 185). Dordrecht, Netherlands/Boston, MA/London, UK: Kluwer Academic.
- Lohmar, D. (2010). The function of weak phantasy in perception and thinking. In S. Gallagher & D. Schmicking (Eds.), Handbook of phenomenology and cognitive science (pp. 159-177). London, UK/New York, NY: Springer.
- Lundborg, P. (2012). Psychedelia. An ancient culture, a modern way of life. Stockholm, Sweden: Lysergia - Subliminal Sounds.
- Marcuse, H. (1969). An essay on liberation. Boston, MA: Beacon
- Merleau-Ponty, M. (1962). The phenomenology of perception (C. Smith, Trans.). New York, NY: Humanities Press.
- Merleau-Ponty, M. (1964). Sense and non-sense (H. Dreyfus & P. Dreyfus, Trans.). Evanston, IL: Northwestern University Press.
- Merleau-Ponty, M. (1968). The visible and the invisible (A. Lingis, Trans.). Evanston, IL: Northwestern University Press.
- Mishara, A. L., & Schwartz, M. A. (2011). Altered states of consciousness as paradoxically healing: An embodied social neuroscience perspective. In E. Cardena & M. Winkelman (Eds.), Altering consciousness: Multidisciplinary perspectives (pp. 328-353). Oxford, UK: Praeger.
- Morris, K. J. (2012). Starting with Merleau-Ponty. London, UK: Bloomsbury.
- Richir, M. (2004). Phantasia, imagination, affectivité: Phenomenology et anthropologie phénoménologique [Fantasy, imagination, affection: Phenomenology and phenomenological anthropology]. Grenoble, France: Millon.

- Sartre, J. (1978). Sartre by himself. New York, NY: Urizen Books. Shanon, B. (2001). Altered temporality. Journal of Consciousness Studies, 1, 35-58.
- Shanon, B. (2002). Entheogens: Reflections on 'psychoactive sacramentals.' Journal of Consciousness Studies, 4, 85-94.
- Shanon, B. (2003). The antipodes of the mind: Charting the phenomenology of ayahuasca experiences. Oxford, UK: Oxford University Press.
- Sjöstedt-H, P. (2015) Noumenautics. Falmouth, UK: Psychedelic Press.
- Spurling, L. (2014). Phenomenology and the social world. The philosophy of Merleau-Ponty and its relation to the social sciences. Abingdon, UK: Routledge.
- Szabo, A., Horvath, L., & Szummer, C. S. (2014). Phenomenology and altered states of consciousness: A new framework for analysis? Psychologia Hungarica Caroliensis, 2, 7-29. doi:10.12663/PSYHUNG.2.2014.2.1
- Tagliazucchi, E., Carhart-Harris, R., Leech, R., Nutt, D., & Chialvo, D. R. (2014). Enhanced repertoire of brain dynamical states during the psychedelic experience. Human Brain Mapping, 35(11), 5442-5456. doi:10.1002/hbm.22562

- Tymoczko, D. (1996). The nitrous oxide philosopher. The Atlantic Monthly, 277, 93-101.
- Ullmann, T. (2012). Fantázia és intencionalitás [Fantasy and intentionality]. In T. Ullmann (Ed.), Az értelem dimenziói [Dimensions of the meaning] (pp. 125-149). Budapest, Hungary: L'Harmattan.
- Vollenweider, F. X., & Geyer, M. A. (2001). A systems model of altered consciousness: Integrating natural and drug-induced psychoses. Brain Research Bulletin, 56(5), 495-507. doi:10.1016/S0361-9230(01)00646-3
- Winkelman, M. (2011a). Shamanism and the alteration of consciousness. In E. Cardena & M. Winkelman (Eds.), Altering consciousness: Multidisciplinary perspective (pp. 160–177). Oxford, UK: Praeger.
- Winkelman, M. (2011b). A paradigm for understanding altered consciousness: The integrative mode of consciousness. In E. Cardena & M. Winkelman (Eds.), Altering consciousness: Multidisciplinary perspectives (pp. 24-41). Oxford, UK: Praeger.
- Wolin, R. (1994). Walter Benjamin: An aesthetic of redemption. Berkeley, CA: University of California Press.