

***Psychedelics and Individuation: Essays by Jungian Analysts, (Chiron, November 2023)***

**Editors Les Stein and Lionel Corbett**

**“The Combination Method: Use of Ketamine as an Adjunct to Analytic Treatment”**

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# **Ketamine and Analytic Process: The Combination Method**

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# The Combination Method

- Ketamine as an adjunct to ongoing analytic treatment
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- Ketamine appeared to open portals into unconscious healthy aspects that had been foreclosed upon by what we call the “trauma complex”
- Relief of protracted, unremitting symptoms including depression, anxiety, dissociation and suicidal ideation

# Durability

- Ketamine has limited durability, meaning that the positive post-infusion effects usually last only between 2-4 weeks before resurgence of symptoms.
- With the combination method, we have observed a significant extension of symptom diminishment over time within our small sample.
- Ketamine created opportunities for work with other healthy “self-state” parts previously dominated by the “trauma complex” that constricted healthy ego functioning.

# Window Of Tolerance (ANS)

## ***Hyperarousal Zone (Sympathetic System)***

Increased sensation  
Emotional reactivity  
Hypervigilance  
Intrusive imagery  
Disorganized cognitive processing

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## ***Window of Tolerance Optimal Arousal Zone***

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## ***Hypoarousal Zone (Parasympathic system)***

Relative absence of sensation  
Numbing of emotions  
Reduced physical movement

The three zones of arousal: A simple model for understanding the regulation of autonomic arousal. Pat Ogden, *Trauma and the Body*, 2006.

# Central Hypothesis

In trying to understand why ketamine, a dissociative agent, assists those struggling with dissociation, we hypothesized that it may *anesthetize* what we designate as the *trauma complex*, by calming the nervous system so work can be done to expand alternative self-state experiences, shore up ego capacities, strengthen reflective function, and importantly, restore a sense of meaning and vitality

# Active Imagination

From our view, active imagination is not possible during an infusion but can be employed within the analytic container afterward as a valuable method that allows for integration of the ketamine experience as well as integration of parts not available prior to the introduction of ketamine.

## Neuroplasticity, Synaptogenesis and Rapid Antidepressant Action

Although the exact mechanisms of ketamine's impact on depressive symptom relief remain elusive (Kohalta, 2021), **animal models** have shown that this agent produces robust markers of neuroplasticity in depression-relevant brain regions.

It increases the number, function and plasticity of synapses that have been diminished due to stress and depression.

In other words, such influences may facilitate adaptive rewiring of damaged and pathological neurocircuitry (Collo, 2018).

# Ketamine Influences the Glutamate System

Biologically, ketamine's ability to affect glutamate results in a cascade of interactions leading to increased neurogenesis and neuroplasticity that ultimately resets the brain to a healthier state (Ko, 2019).

The relationship between glutamate and ketamine is of consequence in appreciating the rapid alleviation of depression for responders within 24 hours after administration (Dutta et al., 2015).

# The Default Mode Network (DMN)

- The DMN is a large-scale, associational cortical network linked with internal mentation, known for increased activity when externally oriented task performance is not required (Shofty et al., 2022).
- 
- The DMN is most active in healthy ways when a person is doing nothing, wasting time, or resting.
- This interwoven network has many functions and the following offer some of the various descriptions in lay terms: “autopilot,” “mind-wandering,” “self-reflection,” and even as the “seat of literary creativity” (Nasrallah, 2023).

# Task Positive Network (TPN)

- The DMN is inversely related to another brain network, the “attention network” also known as the “**task positive network**” (TPN).
- The TPN is aroused during activities such as the following:  
text messaging, playing video games or continuously interacting with social media, while the DMN activity declines (Nasrallah, 2023).
- An over-active TPN decreases the healthy creative functioning of the DMN.

**BTW:** When not locked in traumatized hyper-arousal and when “doing nothing,” the DMN functions at its best and creativity can be well accessed. Ketamine is not needed.

The **DMN at rest** is actually dynamic and is similar to brain states during **REM sleep** and during **free-play**.

We might wonder about the extraordinary increased interest in psychedelics post-Covid with the return to high-speed lifestyles that disallow time for “doing nothing.” Is this a collective trauma response with longings for a “quick fix?”

## **Second Hypothesis: Bringing Together Neuroscience and Clinical Applications within the Combination Method**

- We hypothesize that both the biological and functional brain changes stimulated by ketamine infusions resonate with an increase in connections within the analytic relationship.
- We have witnessed post-infusion manifestations including increased flexibility, movement and interaction with internal figures and images (via active imagination), as well as expansion of interpersonal relatedness and capacity for reflection.
- Ketamine has significantly helped relativize constricting trauma complexes so that opportunities for alternative self-state aspects can emerge.
- It seems to offer neurobiological glue for people who struggle with fragmentation and lays the ground for relational interactions. In resonance, Siegel offers a valuable thought: cohesion in the moment, if repeated, promotes coherency of self over time (2020, p. 84), very helpful for patients and fortifying for those of us working with them.

## **From Neuroscientist Dan Siegel:**

- In resonance, Siegel offers a valuable thought: cohesion in the moment, if repeated, promotes coherency of self over time (2020, p. 84), very helpful for patients and fortifying for those of us working with them.
- Each moment of cohesion is added one by one like a pearl to create the strand of a lifetime.

Marcel Broodthaers: *Le Cirque* (1967)



# Frédéric Chopin, Nocturnes, Op. 9

- The **Nocturnes, Op. 9** are a set of three nocturnes for solo piano written by Frédéric Chopin between 1831 and 1832, published in 1832.
- These were Chopin's first published set of nocturnes. The second nocturne of the work is often regarded as Chopin's most famous piece.

**Seong-Jin Cho (b. 1994) South Korean pianist**

First Prize at the International Chopin Competition for Young Pianists (2008). Cho won First Prize in the XVII International Chopin Piano Competition XVII in 2015

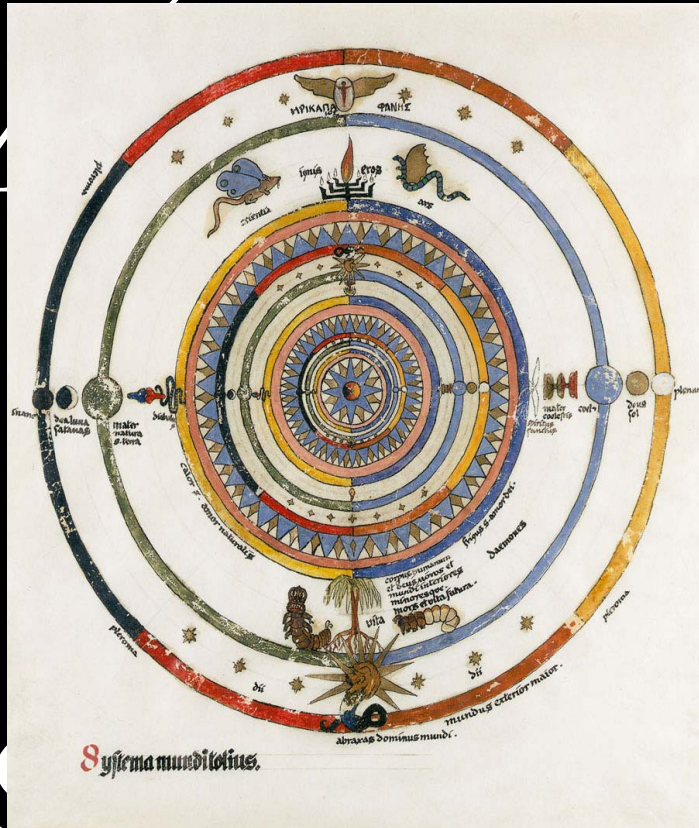
<https://www.youtube.com/watch?v=tTGEo3scnq8>

**Neuroscientist Dan Siegel, *The Developing Mind* (2020).  
Mind not “enskulled” similar to Jung’s ideas about the  
*unus mundus* and Self as center and circumference**

- The specifics of what actually was witnessed during the trips was not necessary; of utmost value was the overall sense of “belonging” where he felt his very being was woven into the fabric of something much larger, universal. These descriptions seem to be similar to neuroscientist Daniel Siegel’s view of the mind as “non-local” and not simply “enskulled” (2020, p. 8).
- Siegel’s idea that the system of mind is both embodied and relational, within and between, and that we all are embedded within ‘mind’ feels quite resonant with Jung’s prescient notions about the collective unconscious and rhizomatic interconnections through the *unus mundus*.
- The psyche is both individual/internal and all-encompassing as it surrounds us; the Jungian self is, simultaneously, the center and the circumference.

Jung, the Ancestors and the Infinite  
Numinous/Awesome: Fascinating/Terrifying  
Need for Constraint on the Infinite: Channeled into Drawing and Writing

# • Systema



SERMO IV XVII

**D**ie toten füllten murrend den raum und sprachen:  
Rede zu uns von Göttern und Teufeln, verfluchter.  
Gott Sonne ist das höchste gut, der Teufel das Gegenteil, also habt ihr zwei götter.  
Es giebt aber viele hohe güter und viele schwere uebel, und darunter giebt es zwei gottteufel, der eine ist das BRENNENDE und der andere das WACHSENDE.  
Das Brennende ist der EROS in gestalt der flamme. Sie leuchtet, indem sie verzehrt.  
Das Wachsende ist der BAUM DES LEBENS, er grünt, indem er wachsend lebendigen stoff anhäuft. Der Eros flammt auf und stirbt dahin, der Lebensbaum aber wächst langsam und stätig durch ungemessene zeiten.  
Gutes und uebles einigt sich in der flamme.  
Gutes und uebles einigt sich im wachstum des baumes  
Leben und liebe stehen in ihrer göttlichkeit gegenüber.  
Unermesslich, wie das heer der sterne ist die zahl der götter und teufel.  
Jeder stern ist ein gott und jeder raum, den ein stern füllt, ist ein teufel. Das leervolle des ganzen aber ist das Pleroma.  
Die wirkung des ganzen ist der Abraxas, nur unwirkliches steht ihm entgegen.



# Ketamine, Science and the Numinous

- Ketamine affects the glutamate system and the default mode network (DMN)
- Experiences of the numinous may actually have neurobiological correlates.
- Gatusso (2023) and others: psychedelics and ketamine induce meaningful, mystical experiences and ego dissolution, as well as a relaxation of subject-object distinctions, central for unitive, mystical states and oneness with nature.
- Therapeutic effects ensue because thoughts and feelings can be viewed

## Ketamine, Default Mode Network and “Oceanic Feelings”

In particular, ketamine affects the DMN so that previously segregated brain systems shift to a more global network, thereby opening to “oceanic feelings” and a sense of oneness described as a significant element of psychedelic treatment. This is of interest to us as analysts who have witnessed the emergence of healthy self-state complexes, following ketamine infusions and restoration of the “religious function” of the psyche.

*Cosmic*

Smokey Mountain Fireflies *Cosmic*



**Cosmic Fireflies 2017**

ESA/Hubble & NASA



## Ketamine Side Effects and Potential Problems

- Ketamine has been reported to cause **urinary and bladder problems** (now known as ketamine-induced cystitis), especially by those who dose at home or buy ketamine on the streets for recreational purposes (Anderson et al., 2022; Srirangam & Mercer, 2012)

# Nemerov concerns about ketamine

- 1) limited randomized control studies;
- 2) lack of regulation and oversight of ketamine clinics that may not comply with minimum recommendations from the APA task force consensus report;
- 3) limited durability; and
- 4) limitations of the current ketamine data base.

- The long-term effects of ongoing use of ketamine have yet to be determined.
- Gerard Sanacora, from the Yale School of Medicine emphasizes his biggest concern about ketamine treatment:
- **“It is critical for it to be a part of a comprehensive mental health plan, not in isolation”** (as cited in Backman 2023).

A clinical anecdote of concern from LC and JM:

With ongoing infusions, one of our patients developed numbness in finger tips, toes, tongue, and lips that has not abated, although it had done so after several previous infusions. He was evaluated by a neurologist who could not give a clear diagnosis. No other reports of this problem in relation to ketamine have surfaced in the literature *to date*.

# Letter from Jung to Fr. Victor White

## April 10, 1954

In the letter to Fr. White, Jung amplifies his concerns about mescaline and/or LSD use by describing the role of *Zaubrlehrling* [*Sorcerer's Apprentice*]: who learned from his master how to call the ghosts but did not know how to get rid of them again.

Here Jung is referring to Goethe's famous 1797 poem  
"The Sorcerer's Apprentice"  
(German: "Der Zauberlehrling") with the following well-known  
lines:

*Die ich rief, die Geister,  
Werd ich nun nicht los!*

Loosely translated as

"I cannot get rid of the spirits I bid"

.

The earliest known version of the “Sorcerer’s Apprentice”:

“The Lover of Lies”

also known as

“The Doubter or Philopseudes”

(Greek: Φιλοψευδής ἢ Ἀπιστῶν)

Written by the Syrian Lucian of Samosata in the Attic dialect  
of ancient Greek.

## Fantasia, Disney 1940

Influenced by Disney's dinner with Stokowski who recorded Dukas' Sorcerer's Apprentice with the Philadelphia Orchestra. Began making a profit in 1969 when c experience







# Fundamental Archetypal Substrate

- Integration/Disintegration
- Expansion/Contraction

# Cross-cultural Diminishment of Free-Play A Global Crisis

AMERICAN ACADEMY OF PEDIATRICS POSITION PAPER 2018:  
RESEARCH ACCUMULATED ON THE NECESSITY OF FREE PLAY FOR ALL  
AREAS OF DEVELOPMENT

Yogman M., Garner A. & Hutchinson J. et al. (2018). AAP Committee on Psychosocial Aspects of Child and Family Health, AAP Council on Communications and Media. 'The power of play: a pediatric role in enhancing development in young children'. Pediatrics, 142, 3.  
<https://fpg.unc.edu/sites/fpg.unc.edu/files/resources/presentations-and-webinars/The%20Power%20of%20Play.pdf>

## Winnicott on the Value of Nonsense and The Need for Rest

- The therapist who cannot take this communication [**nonsense**] becomes engaged in a futile attempt to find some organization in the **nonsense**, as a result of which the patient leaves the **nonsense** area because of hopelessness about communicating nonsense.
- **An opportunity for rest has been missed** because of the therapist's need to find sense where nonsense is. The patient has been unable to rest because of a failure of the environmental provision, which undid the sense of trust. The therapist has, without knowing it.

**Neuroscientist Dan Siegel, *The Developing Mind* (2020).  
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## Dreaming, Sleep and Play, Meares 2005

The linking together of previously disconnected elements of experience depends, both on play and in the dream, on more than associational ties. It involves a storytelling element that is crucial in binding into a new coherence data from disparate spheres of human experience, including, for example, the natural environment, forms of relatedness, feelings, morality, personal attributes, wishes and hopes. This function can be inferred from studies of memory in relation to REM sleep. (Meares 2005, p. 56)

# Tartini's Dream (1824)

By Louis-Leopold Boilly (1761-1845)

Bibliothèque nationale de France



# Tartini (1692-1770) Violin Sonata in G Minor

## “Devil’s Trill Sonata” (1713-1740??)

As legend has it, Tartini was inspired to compose the sonata after the Devil appeared in his dream, delivering a particularly intense and magnificent violin performance. Tartini allegedly recounted his vision to French astronomer and writer Jérôme Lalande, who included the story in his travel memoir *Voyage d'un François en Italie, fait dans les années 1765 & 1766*. The account is breathtaking:

*“He [Tartini] dreamed one night, in 1713, that he had made a compact with the Devil, who promised him to be at his service on all occasions; and during this vision everything succeeded according to his mind. In short, he imagined he gave the Devil his violin, in order to discover what kind of musician he was; when to his great astonishment, he heard him play a solo so singularly beautiful and executed with such superior taste and precision, that it surpassed all he has ever heard or conceived in his life. So great was his surprise and so exquisite his delight upon this occasion that it deprived him of the power of breathing.”*

Mesmerized by the Devil’s brilliant and awe-inspiring playing, Tartini attempted to recreate what he had just witnessed:

*“He awoke with the violence of his sensation and instantly seized his fiddle in hopes of expressing what he had just heard, but in vain; he, however, then composed a piece, which is perhaps the best of all his works (he called it the “Devil’s Sonata”) but it was so inferior to what his sleep had produced that he declared he should have broken his instrument and abandoned music forever, if he could have subsisted by any other means.*

# Human Need for Free and Open Space

*Perhaps, the most important aspect to emphasize for our discussion is the profound significance of the human need for free and open space in a relaxed state for the mind, whether in direct relation to others or from within as in dreams or during moments of quiet solitude that is required for the mind to engage in play and it is through play that cohesion, continuity and a coordinated sense of self have the opportunity to become consolidated.*

# Environments that propitiate transcendent processes

- Environments that propitiate transcendent processes are those when stress is low without elevated levels of cortisol and an individual is in a state of relative affect regulation within the “window of tolerance.”
- If flooded by anxiety and in either hyper-aroused fight/flight or hypo-aroused freezing, an individual's capacity to be present to inner or outer interactions is limited. Under such circumstances, the affectively regulated analyst plays an important mediatory role in helping the analysand enter the window of tolerance that then opens possibilities for transcendent moments and symbol formation.
- If the ego is not sufficiently well-developed and an individual is possessed by powerful trauma complexes, work needs to be done toward titrating small increments of difficult emotions that can be metabolized, attenuated and integrated into an overall life narrative.

# Mind not simply “enskulled” Dan Siegel

He sees the mind as “non-local”  
and not simply “enskulled.”

Siegel describes the mind as emergent,  
self-organizing and existing “within and between,” “embodied” and  
“relational.”

Siegel’s ideas about the non-locality of mind and that we  
all are embedded within “mind” feels quite resonant with Jung’s  
visionary notions about the collective unconscious and inter -  
connection through the unus mundus. The psyche is both

“Cohesion in the moment leads to coherency of self over time” Siegel (2020, pp. 85-86)

Given Jung’s sensitivity, extensive fund of knowledge and first-rate psychiatric training, along with his avid curiosity, I think that he had an extraordinary capacity to meet the other on multiple levels at the same time, thus offering those in his care a sense of **“cohesion in the moment leading to coherency of self over time.” This idea of Siegel’s leads me to imagine each moment of cohesion is, metaphorically, like a pearl. If such moments of cohesion are repeated over time, they become instantiated as neural networks in the brain. Hebb’s Law: “Neurons that fire together, wire together.” The pearls are then strung together into a strand----a coherent**