

Yoga sutra, Neuroplasticity and Cognitive Behavioral Therapy - A Continuum



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Human brain is probably the most complex creation in the universe. Modern science has achieved elementary understanding of the human brain despite neurology being one of the most researched fields of science. While, we know something about the structure of the brain, its functions and treatment of malfunctioning, there is very little understanding about the relationship between brain and consciousness.

Cut back to the 2nd CE when Patanjali wrote the Yoga Sutra, one of the six schools of philosophical thought of Hindu religion. This article explains how Yoga Sutra forms the basis of two fundamental concepts of modern clinical psychology - Neuroplasticity and Cognitive Behavioral Therapy (CBT). Neuroplasticity, attributed jointly to William James (Psychologist, 1890s) and Jerzy Konorski (Neuroscientist, 1950s), is our brain's ability to reorganize and rewire its neural connections so as to learn new skills, adapt to new environment, heal from injuries and even develop new ethos. CBT, attributed Aaron T Beck (Psychiatrist 1960s), is now an umbrella term for a number of psychotherapy tools that utilize neuroplasticity to affect corrective changes in cognition and behavior.

First, the foundational relationship between Yoga sutra, Neuroplasticity and CBT. Patanjali opens with one of the most cited aphorisms, "Yogah chitta vritti nirodhah" (Sutra 1.2) or "Yoga is the cessation (nirodha) of the fluctuations (vritti) of the mind (chitta)". This also forms the basis of neuroplasticity and CBT. That mind is not fixed, it is dynamic and these modifications can be regulated or even stilled. Yoga sutra and CBT seem to be identical in their diagnostic approach: that mind's tendency to generate inaccurate, habitual patterns of interpretation is the source of suffering.

The second part of foundational relationship lies in Sutra 2.33, Vitarkabaddhane pratipaksha bhavanam, and Sutra 2.34, vitarkaa hinsadayah kritakaritanumodita lobhakrodhamahapoorvaka mridumadhyadhimatra dukhajnananantafala iti pratipakshabhavanam. Together they say when one is disturbed by negative thoughts, the opposite should be cultivated and that violent, avaricious, or deluded thoughts, whether acted upon, caused, or merely permitted, lead to suffering and ignorance. CBT's cognitive restructuring is Pratipaksha bhavana only. It is how a therapist helps a patient identify an automatic negative thought, examine the evidence

for and against it, and replace it with a more balanced positive thinking. Repeated activation of a thought pathway increases synaptic efficiency along that route and deliberate activation of alternative patterns begins to build competing neural pathways.

The third part of foundational relationship is what Patanjali introduces a powerful distinction. Drashta drishmatrah shuddhopi pratyayanupashyah (Sutra 2.20), or the seer (drashta) is pure awareness but appears to take on the forms of the mind. This suggests that there is a "witness consciousness" separate from thoughts and suffering arises when that witness begins to identify itself with the thoughts. Modern psychology also echoes this when it prescribes, you are not your thoughts and you should be observing thoughts without attachment (cognitive diffusion) or asks you to observe thoughts as passing events (Mindfulness based CBT).

Finally, the fourth foundational relationship which is perhaps the most profound overlaps. Patanjali says samskara sakshat karanat purva jati jnanam (Sutra 3.18), or through direct perception of samskaras, knowledge of acquired tendencies arises. And te pratiprasava heyah sukshmah (Sutra 2.10), or subtle impressions are resolved by reversing their process. Samskara are neural pathways and encoded neural patterns and therapy comprises of reprocessing and weakening maladaptive neural pathways, patterns and circuits.

Next, the method or the path. Patanjali emphasizes two pillars. "Abhyasa vairagyabhyam tan nirodhah" (Sutra 1.12) or the fluctuations are stilled through practice (abhyasa) and detachment (vairagya). Further, "Sa tu dirgha kala nairantarya satkara asevitah dridha bhumi" (Sutra 1.14) or practice becomes firmly grounded when done for a long time, without interruption, and with devotion. This almost describes neuroplasticity and CBT in entirety. That the brain can physically restructure itself by thickening the prefrontal cortex or

shrinking the amygdala, provided there is consistency, repetition and salience in the process. Further, while abhyasa builds new pathways, vairagya (dispassion/detachment) serves to weaken old ones. In CBT, this is the process of de-centering where a patient learns to distinguish between having a thought and the thought is the reality. This detachment

leads to synaptic pruning, where the brain eliminates underutilized or "inhibited" connections.

The Ashtanga (eight-limbed) system of Sutra 2.29, comprising yama (restraints), niyama (observances), asana (posture), pranayama (breath regulation), pratyahara (withdrawal of senses), dharana (concentration), dhyana (meditation), and samadhi (absorption), gives a graduated protocol of moving from behavioral regulation to cognitive regulation to metacognitive transformation. This mirrors the layered architecture of modern psychological intervention: behavioral activation (analogous to yama, niyama, asana), physiological regulation (pranayama, attentional training (dharana), sensory withdrawal (pratyahara) and finally metacognitive reprocessing (dhyana, samadhi).

This is a basic glimpse of how modern corrective psychotherapy has parallels in Yoga Sutra. Yoga Sutra, Neuroplasticity, and CBT converge on a core insight: the mind's habitual patterns are the source of suffering, those patterns are not fixed, and deliberate, sustained practice can restructure them - whether described as abhyasa, synaptic strengthening, or cognitive restructuring. Neuroplasticity offers a scientific account of how these changes occur biologically, CBT offers a structured therapeutic protocol to affect those changes. But Patanjali's framework went further where chitta is not reducible to the brain; it encompasses dimensions of consciousness that the neuroscientific framework does not yet address. It added the final goal as kaivalya (isolation of pure consciousness from matter) which has no equivalent in neuroscience or clinical psychology. Yoga Sutra offers a comprehensive phenomenological map of the stages of mental transformation, and a philosophical framework for understanding why liberation, in any meaningful sense, requires not just thinking differently, but ultimately transcending the compulsion to be defined by thinking at all. Tada drastuh svarupe avasthanam (Sutra 1.3), or the seer abides in his own nature.

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Fable with Moral

Abhinha Jataka No. 27

(Book 1 Ekanipat)



Jataka tales are part of Buddhist Theravada literature, which depict earlier incarnations of Gautama Buddha. Long ago, one of the royal elephants became best friends with a mahout's dog. The dog used to go to the stall of the elephant, and eat the portions of rice which fell where the elephant was fed. Frequenting the place for food's sake, the dog grew very friendly with the elephant. The dog would often swing on the elephant's trunk. There came a point when the two would not eat without each other and always longed for togetherness.

One day a villager bought the dog and took it home. The elephant missed its friend so much that it refused to eat, drink, or bathe. When the crowned head heard of the elephant's behavior, he sent the Bodhisatta to inquire into the matter. He examined the elephant and concluded that nothing physically ailed it. Pondering over the problem further, he guessed the cause to be emotional. He wondered if it was missing a close friend. The Bodhisatta asked the elephant's mahout if the elephant had any friends, and learnt

about the dog. He was told that the dog had been sold, but he did not know where the buyer resided. The Bodhisatta explained the situation to his majesty and requested for an official proclamation that whoever possessed the dog would face punishment. As soon as the dog's new owner heard the official order, he released the dog which ran back to the palace. The elephant cried tears of joy upon reuniting with its friend and the two once again ate a meal together.

In the lifetime of the Buddha the elephant and the dog were earlier births of two inseparable friends; one a disciple of the Buddha who lived at the monastery and the other a lay follower. The two men shared such camaraderie that they sat and talked together through the day. When the Buddha heard some of his disciples discussing the two men's friendship, he told them this story so they knew that the pair had also been best friends in the past.

Moral of the Fable
Friendship is immortal!



Wisdom Word Search

H G N M A I B A H I K A I
I A A L I B O J A S A N M
D L K Q C H I N J A A K A
A R A S A N Y A I L K I N
K P A D H J A M E T P A A
L A J P T E T Q P I O J M
O A T X Y L L G A I T K A
N M M W T Y I V S K L S S
I E A P O M B I R O L H I
T T A Q P Q A L A S D X N
I P G P R M A I B I U L G
S I D A H I D A K O I W X

WORDS TO FIND

Ametpa, Ametpi, Chinjaak, Haksheh, Hidaklon, Maiba, Maibi, Mana-Masing, Pombirol, Sida-Hidak

AMETPA - Male traditional therapeutic practitioner in Manipur who provides traditional healings treatments.
AMETPI - Female counterpart of the Ametpa.
CHINJAAK - Food; nourishment essential for sustaining life and health.
HAKSHEL - Health and overall well-being, encompassing physical and mental balance.
HIDAKLON - The traditional science of medicine (Hidak = medicine, Lon = treatise); also refers to ancient medicinal manuscripts of the Meitei knowledge system.
MAIBA - Male traditional healer and spiritual practitioner among the Meiteis, skilled in herbal medicine and ritual mediation between humans and deities.
MAIBI - Female counterpart of the Maiba, serving as healer and ritual specialist.
MANA MASHING - Plants and herbs used in traditional healing as well as everyday consumption.
POMBIROL - Science of human physiology and anatomy, indigenous medical understanding.
SIDA HIDAK - Life-saving or potent medicinal remedies in traditional practice.

Note: These terms come from Manipuri, one of India's 22 Scheduled Languages, and reflect Manipuri's living indigenous healing traditions.

Marvels of India

YOGA

A Wholesome Means of Health and Well-being Among Bharat's greatest gifts to humanity is Yoga, concretised in Patanjali's Yoga Sutras through the eight limbs (Ashtanga): Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi, i.e., a comprehensive scheme for physical, mental and spiritual well-being.

Its Historical Journey

Yoga is one of Bharat's most enduring civilisational contributions, with a long evolution through Vedic, Upanishadic, Buddhist, Jain and classical traditions. The classical period is particularly associated with Patanjali's systematisation, who organised earlier Yogic ideas into a lasting framework.

A Device of Discipline as well as Physical and Mental Control

Yoga became a disciplined path of ethical restraint, breath control, concentration, meditation and contemplative absorption, rather than only a set of physical postures.

An Innovative Way of Practice and Self-Transformation

Yoga developed as a practical science of self-mastery across traditions, with later forms expanding emphasis on bodily techniques while preserving the broader aim of inner transformation. Reliable histories show that it was not a single frozen method but a living tradition that evolved over centuries through multiple Indian philosophical streams.

A Vehicle of Bharat's Soft Power

International Yoga Day, now a vibrant global movement, affirms that Bharat's influence on the world stage remains one of inspiration.



Did you know?

The Power of Fermentation

Did you know the humble Idli and Dosa are nutritional powerhouses? The natural fermentation of rice and urad dal is a biological marvel. This process breaks down complex starches and phytic acid, significantly enhancing the bioavailability of essential nutrients like Vitamin B12, Folic Acid and Iron.

Rich in live probiotics, these staples support gut health and improve digestion. The result is a light, protein



complete meal with a low glycemic index, proving that traditional wisdom and modern science make a perfect pairing for your plate.

QUIZ Health, Nutrition & Well-Being

Questions	Option A	Option B	Option C	Option D
1 Who developed the "cheek flap" method for repairing nose in ancient India?	Mathara	Sushruta	Charaka	Nagarjuna
2 Which of these limbs of Ashtanga Yoga means "personal discipline"?	Pranayama	Dharana	Samadhi	Niyama
3 What does the letter 'S' stand for in the AYUSH acronym, which represents the official traditional medical systems of India?	Shunya	Siddha	Spiritual	Surgery
4 What is the term for body's inherent power of natural healing or self-preservation in Unani medicine?	Tabiyat	Mizaj	Arwah	Nabz
5 Which path did Lord Buddha advocate to achieve wellbeing, avoiding the extremes of self-indulgence and self-mortification?	The Path of Happiness	The Path of Kindness	The Ascetic Path	The Middle Path

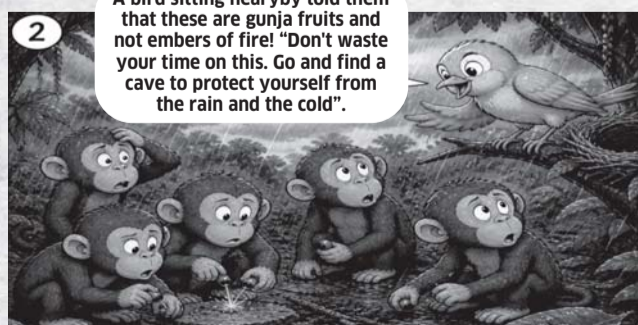
ANSWERS: 1 - B, 2 - D, 3 - B, 4 - A, 5 - D

panchatantra

The Angry Monkey and the Bird



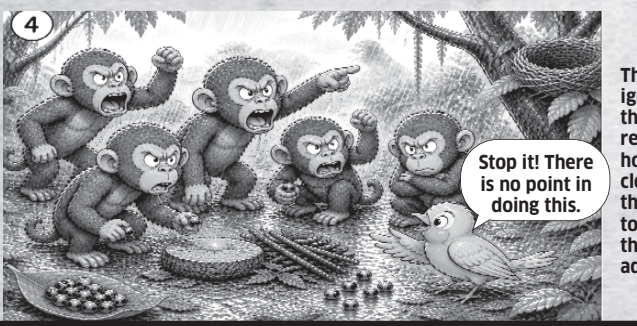
1 A group of monkeys were trying to light a fire in the jungle to escape from the cold on a rainy day. They were trying to light the fire with gunja fruit!



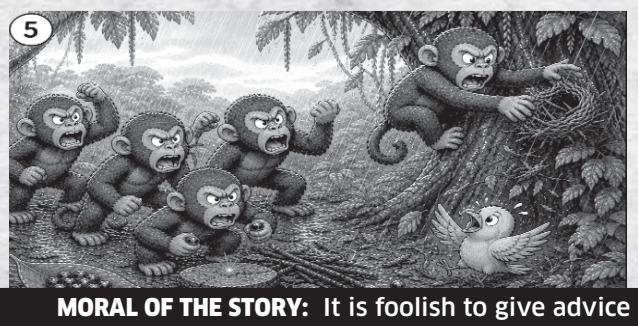
2 A bird sitting nearby told them that these are gunja fruits and not embers of fire! "Don't waste your time on this. Go and find a cave to protect yourself from the rain and the cold".



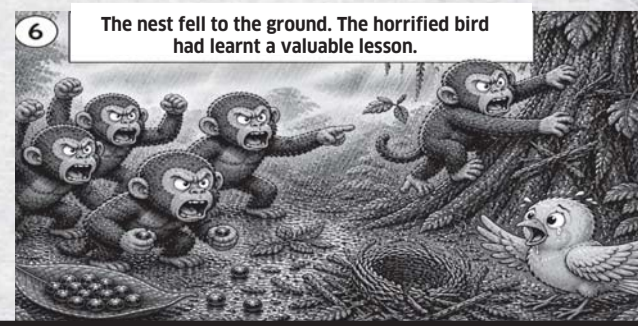
3 The monkeys were irritated with the bird. They were already wet, hungry and frustrated. They had no desire to take advice. "Go away!" they shouted at the bird.



4 The bird ignored their rebuke and hopped closer to the ground to give them her advice.



5 The bird kept giving her unsolicited advice to the monkeys. By now the monkeys had lost their temper. One of the monkeys climbed up the tree and destroyed her nest in anger.



6 The nest fell to the ground. The horrified bird had learnt a valuable lesson.

MORAL OF THE STORY: It is foolish to give advice to deaf ears!