

David Cycleback

Attempts to Expand the Human Mind



DAVID CYCLEBACK

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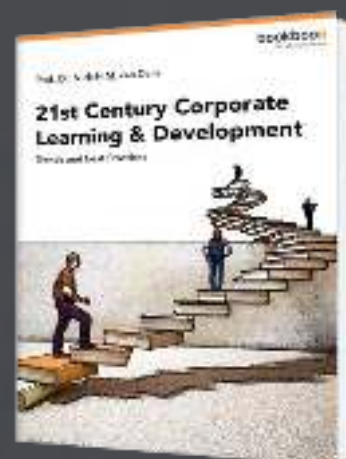
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ABOUT THE AUTHOR

David Cycleback is Director of Center for Artifact Studies, and an internationally known scholar working in cognitive science, philosophy and artifacts history. He was runner-up for the International Book Award for Philosophy for *Noise Music: Cognitive Psychology, Aesthetics and Epistemology* and a three-time Eric Hoffer Award Finalist. In their second printing by China's National Photographic Art Publishing House, his guides *Judging the Authenticity of Prints by the Masters* and *Judging the Authenticity of Photographs* were the first comprehensive books on the subjects published in Asia, and *Art Perception* is one of four books students are recommended to study in preparation for India's Common Entrance Exam for Design (CEED) for postgraduate studies in technical design. He has been a practicum coordinator for the University of Washington, and an authenticity researcher and writer for Arizona State University's Society for American Baseball Research. His other books include *Understanding Human Minds and Their Limits*, *Philosophy of Artificial Intelligence*, *Cognitive Science of Religion and Other Beliefs Systems*, and *Authenticating Art and Artifacts: An Introduction to Methods and Issues*.

Peer reviewers

Alison Wald received her MS in Clinical Psychology from Northeastern University in Boston, and has been a fellowship and medical residency manager at the University of Washington Medical School and Swedish Medical Center.

Reverend Gabbai Eli Shirim Lester, faculty member at All Paths Divinity School in Los Angeles, reviewed chapters 5, 6, 8, 9, 10.

1 INTRODUCTION

"What we know is a drop. What we don't know is an ocean."

– Isaac Newton

"There are no answers. Only choices."

– Solaris (2002)

This text is the third and final installment in the Bookboon Cognitive Science series, the others being *Understanding Human Minds and Their Limits* and *Philosophy of Artificial Intelligence*.

The human mind, knowledge and understanding are limited, and this is a brief critical look of some of the general historical, current and theoretical areas used to try to expand the human mind. These methods range from ancient religious mysticism to general research and education to futuristic medicine and technology.

Not only is the human mind limited in its capabilities, it is in many fundamental ways self-contradicting and self-conflicting, and beyond human understanding. Not only is there no answer to what is the 'best' or 'correct' way to expand the mind-- or even what is expansion--, each method of trying to expand the mind involves trade-offs. Expanding the mind in one way limits or even reduces it in another way.

This book serves as food for thought, an introductory stepping stone for further reading and research, and welcomes and encourages debates, disagreements and the reader's own theorizing and ideas. Links to further reading and videos are included throughout.

2 WHAT IS MEANT BY EXPANDING OF THE MIND?

Expanding the mind means acquiring more knowledge, insight and/or mental capabilities. It often involves having more factual knowledge, but also, or alternately, creative ‘big picture’ insights into things. There are different ways of viewing things, and the mind can expand in different ways.

Expanding the mind can involve biological or artificial expansion of the brain beyond its normal capabilities. However, it can also mean better using the capabilities it already has. Expansion can range from altered state of consciousness or advanced genetic editing to simply reading a book or taking a class to increase one’s knowledge and get a different perspective.

Expanding the mind can be done in different ways, and is also a matter of degree-- expand it a little, expand it a lot. There are tradeoffs that make for difficult if not impossible decisions and value judgments. Expanding one part of the brain or one mental aspect often involves or even requires suppression or diminishment of another.

2.1 QUESTIONS

What are some qualities or aspects that you think are part of the expansion of a mind? Beyond just factual knowledge, do you think qualities such as increased empathy, social intelligence or emotional intelligence are important?

3 THE NORMAL LIMITS OF HUMAN MINDS

3.1 OVERVIEW

Learned philosophers, psychologists, theologians and thinkers throughout history have known that the human brain, senses and experiences are limited, and the human is unable to know and comprehend much about the universe, its environment and itself. Many things are simply beyond the human mind and always will be. Most religions and belief systems state this in some form or other.

"This state (Nirvana), the Buddha insisted, is entirely beyond human comprehension, beyond any distinction between existence and nonexistence, and therefore indescribable."

– Charles O. Hucker, *China's Imperial Past* (Stanford University Press)

"God is beyond the capacity of the human mind to understand."

– Professor Rabbi Aharon Shear-Yashuv

"No vision can grasp Him. He is above all comprehension"

– The Quran

"I was born not knowing and have had only a little time to change that here and there"

– Nobel Prize winning physicist Richard Feynman

The first book in this series, *Understanding Human Minds and Their Limits*, introduces how biology and psychology put limits on humans' knowledge and understanding of the universe, their immediate environment and themselves. Beyond the sensory limits and one's finite place in time and geography, the cognitive methods that allow humans and other beings to make the speedy decisions needed to function and survive inhibit and distort information and prevent objective and even accurate judgment.

The book can be downloaded at:

<http://bookboon.com/en/understanding-human-minds-and-their-limits-ebook>

3.2 KEY POINTS

The key points of that book are, one, to show how the human mind and senses work: How the mind processes sensory information and comes up with perceptions and judgments. And, two, to show the limits of the human mind vis a vis these information processes. The following is a brief overview of key points of the book:

The human mind is a limited information processor.

To function and survive, the human mind is designed (for lack of a better word) to make speedy practical judgments from the limited and ambiguous information of its environment. The mind does a good job at this. However, it is still making guesses and so there is an inherent margin of error. Sometimes the guesses are correct, while other times they are off. Visual illusions are examples where perceptual guesses are wrong.



Figure 3.1 Despite appearance, the middle bar does not change in color or tone. If you cover up the image so only the bar is showing, you will see this. Visual illusions demonstrate that reality and human perception of reality are different things.

The human mind has many methods, or shortcuts, for making speedy perceptions and decisions in the face of ambiguous information. These include shape and form biases, imagination, intuition and comparisons that are described in detail in the book. These methods are useful, but involve arbitrariness, biases, subjectivity, margins of error, and can result in illusions and errors in perception.



Figure 3.2 In the above picture you perceive a person in the lines and squiggles of the Rembrandt etching just as many do an animal in the cloud. This is an example of how the human brain organizes information into subjective patterns and forms.

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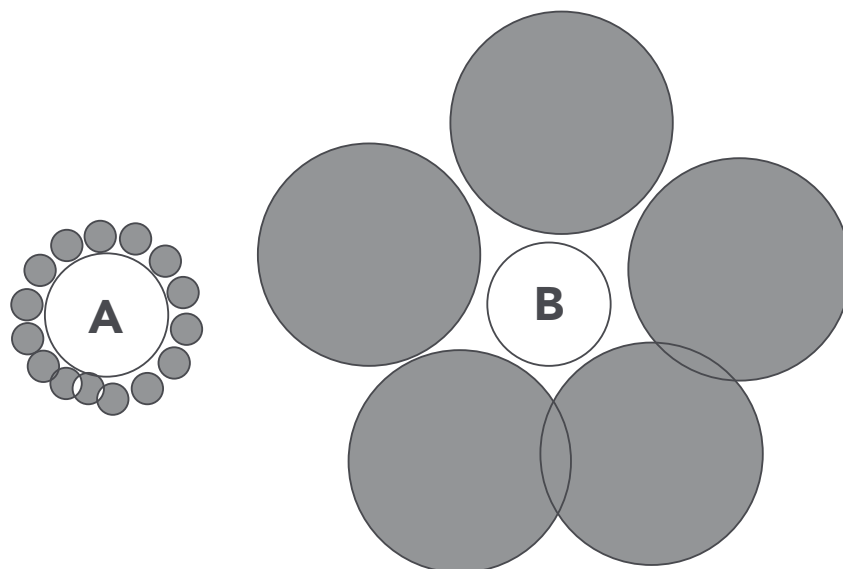


Figure 3.3 Humans perceptions are by making comparison to nearby objects and qualities. However, this often leads to errors. The middle dots on the left and right are the same size. It is the surrounding grey circles that make circle then appear different in size

Many of the methods and reactions are automatic and nonconscious. The human is unaware of them happening and often can't correct them. Humans have biases that they are and always will be unaware of.

The human perception and judgment are subjective, formed and biased by experience, points of view, physiological abilities and disabilities, psychological drives. Intuition, emotional and aesthetic perceptions and reactions are important to human function and thinking, but involve subjectivity.

Despite popular perception, the human mind is designed for practical function not finding of truths. Practical function involves suppression and distortion of information. Attention is just one example of how humans must distort and suppress information to focus and function. Self deception and hiding information are important parts of function, and the human mind is good at at both.

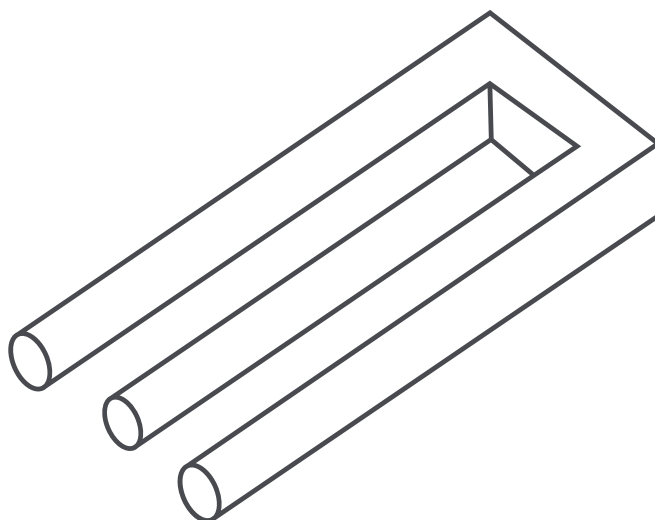


Figure 3.4 The *impossible trident* visual illusion demonstrates how humans form perceptions by focusing on some information while ignoring other. The viewer forms a perception about the whole from looking at just one end. When she looks at the other end, she realizes her extrapolation was wrong. Unlike some visual illusions where part of the graphic is blocked and left to the imagination, there is no missing information here. All of the information is there for the eyes to see, but the viewer forms her initial perception as if information is hidden. She mentally hides, or ignores, the information herself.

Symbolic language is a key to human thinking and practical success as a species, but distorts, colors and limits perception. It is an artificial and arbitrary way to translate and simplify information and complex ideas for practical purposes, but all translations are just that: translations.

Humans often have conflicting opinions and points of view in their own minds. Some topics are beyond human comprehension and humans use irreconcilable mental methods to try to understand and explain them--, say emotions versus logic, left brain versus right brain. All deep thinkers come to the point where they realize that they don't have the mental tools to answer certain questions.

To humans, the reliability of the human mind cannot be known. A human uses his mind to test and judge the reliability of his mind. If your goal is to determine the accuracy of the human mind, that means you do not know the accuracy of the tool used for testing and judging (the human mind), which makes it impossible to determine the accuracy of the human mind.

Human thoughts are influenced by evolutionary thinking and survival instincts. This thinking is important to function, but makes human thought biased and myopic. People mistake primordial urges for objective, universal truths.

In defense of humans, they are amazingly adept at making many good guesses. Yes, there is a margin of error and sometimes big mistakes are made, but on the whole humans are adept at doing such things as judging distance and size, identifying objects in our daily lives, guessing how far away is that milk jug, how tall is that doorway, walking through a room without hitting a table or wall. However, when you get into realms of philosophy, theology, 'truth' and trying to understand and explain the universe, the natural misperceptions, blind spots and inescapable illusions take on profound significance.

While the book *Understanding Human Minds and Their Limits* focuses on how the mind normally works and its inherent limits, it very briefly touches on that humans have long tried, and try, to expand their minds and consciousness.

"Humans have long attempted to expand their minds and consciousness. This includes via fact finding-- science, knowledge--, mysticism, religion, meditation and even experimental drug taking. The future envisions artificial intelligence, transhumanism and cyborgs."

The book left it largely at that, as that was not the subject. However, the rest of this book looks at some of the wide variety of attempts to expand the mind, consciousness and knowledge.

Further reading:

[Understanding Human Minds and Their Limits](#)

4 LOW HANGING FRUIT: LITTLE DAILY THINGS TO IMPROVE YOUR MIND

With an academic book on neuroscience, altered states of consciousness, artificial intelligence and transhumanism, it at first seemed trite to include a chapter on simple habits for a better brain. However, part of expanding the mind is getting beyond vanity and biases. Changing little practical things can produce better results than unfulfilled grand theories.

The following are just some simple things that anyone can do to improve their mind. I'm sure you can think of your own and find more online.

- Better organize your time. You know you could spend more time reading a good book, watching a documentary, reading an informative article. Take time to do something intellectually stimulating regularly.
- Learn about subjects outside of your experience. Read a book or watch a documentary or video about a topic you don't know about. Take a class on

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something new. Learn a new skill. Learn about a different culture or place. Learn a new instrument, learn how to dance, a new language. Learn a new game or sport.

- Have new experiences. Travel to different countries, go to a different place in town, a new park, a new museum or restaurant. Pick a new hobby.
- Be curious, ask questions, make learning and doing new things fun. Hang around people who are curious, intelligent and like to learn.
- Get different viewpoints. Listen to what others say, consider other political arguments, learn how different peoples and cultures think. Learn about other religions and philosophies. Realize there are different legitimate perspectives to issues.
- Do right brain and left brain things. Learn new facts and new scientific topics and historical subjects, but also make art, take an art class, learn to dance.
- Experience art. Art, including new art outside of our experience, expands the mind. Even scientists such as Einstein were into music and extolled the importance of imagination and creativity.
- Write down what you learned. Review what you learned. This helps you retain the information.
- Explain what you learned to others. Having to put it into words so others can understand forces you to really understand.
- Take care of your health, get your sleep and exercise, eat well.
- Have an open mind and know how little you know, including in this book. Scientists may pooh pooh reading a chapter on mysticism or Eastern psychology, while the religious may pooh pooh reading a chapter on science-- and they're all wrong. Learning about all points of view is important.

4.1 HOMEWORK

Go online and read an article or watch a video about two new new subjects you don't know about. They can be include an encyclopedia article about someone you don't know about, a short video on a country or city you don't know about, a scientific concept, another religion or cultural practice, or whatever you choose.

Briefly summarize what you have learned.

5 EXPANDING AND STUDYING THE BRAIN'S LEFT HEMISPHERE AND THE UNCONSCIOUS: INTRODUCTION

This chapter introduces the unconscious, intuitive and creative side of the brain that many feel are integral to the expansion of the mind.

5.1 OVERVIEW

While many envision expanding of the mind involving better practical functioning, sharper reason and logic, more factual knowledge and calculating ability-- and these are important--, others see the development of the unconscious, intuition, emotional and aesthetic perception, as essential, and even the most important path.

Cognitive and artificial intelligence scientists know the importance of subconscious intuition to human thinking, intelligence and function. Humans function and make perceptions and judgments in part using intuitive knowledge, aesthetic and emotional senses, with intuition being a subconscious archive of knowledge.

Psychologist Carl Jung wrote how the conscious was only the tip of the iceberg that is the mind. He felt it important to study the vast unconscious mind, to tap into it. He believed that the unconscious mind contains not only personal information but genetic evolutionary information shared by all of the species. Just as the human body developed via evolution, so did, and does, the mind.

It only makes sense that the expansion of the mind will involve the expansion and study of this unconscious side of the mind. Even if one thinks conscious logic, reason and factual knowledge are essential, so, one must agree, are intuition, emotional intelligence and creativity. Knowledge and self awareness of the brain-- its makeup and how it works-- is itself an expansion of the mind, and an expansion of knowledge

Video: Nobel Physics Prize winner Richard Feynman on the importance of creativity: [“Think Like A Martian: Imagination as Science”](#)

5.2 THE RIGHT AND LEFT HEMISPHERES OF THE BRAIN

Nobel Prize winning neuropsychologist Roger Sperry studied how the human brain is split into the two hemispheres. the left hemisphere and the right hemisphere. Each side has different qualities and control over different functions and sides of the body. University of Indiana Medical School neuroanatomist Jill Boyte Taylor said that the two hemispheres have “different personalities.”

The left hemisphere is more verbal, analytical and orderly than the right hemisphere. It is sometimes called the digital brain. It is better at things such as reading, writing and computations, and works on aspects such as logic, ordering, linear thinking, mathematics, facts, symbolic language.

The right hemisphere is often called the creative brain, and is more visual and intuitive. It is more creative and less organized, and works in areas such as imagination, arts, rhythm, intuition, daydreaming, feelings.

The two sides work together constantly, and the popular idea of a “left brain” versus “right brain” person is a myth. The two sides work simultaneously, bringing different qualities and skills to the tasks, whether the task is judgment, perception or language. Even learning facts and doing mathematics involves emotions and aesthetics.

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Many say that in the modern age humans have overdeveloped the left hemisphere at the expense of the right brain. Schools have removed art and music classes, which are essential for developing the brain.

“The intuitive mind is a sacred gift and the rational mind is a faithful servant. We have created a society that honors the servant and has forgotten the gift.”

– Albert Einstein

The following four chapters look at attempts to study and tap into the unconscious mind.

5.3 VIDEOS

[“Introduction to Carl Jung - The Psyche, Archetypes and the Collective Unconscious”](#)

[“What’s the Difference Between the Right Brain and Left Brain?”](#)

[Psychology Professor Michael Gazzaniga explains the Split Brain Theory](#)

6 MYSTICAL EXPERIENCES

Mysticism has long been an attempt to expand the mind and understanding beyond normal boundaries. It suppresses parts of the brain in order to more fully utilize other parts.



Figure 6.1 The Ecstasy of Saint Francis by Francisco de Zurbarán and the meditating Buddha

6.1 INTRODUCTION

Mystical experiences are altered states of consciousness that seem to the person in the state to take him beyond the normal consciousness and give him a union or experience with a transcendent reality. Mysticism is the area of trying to reach mystical states.

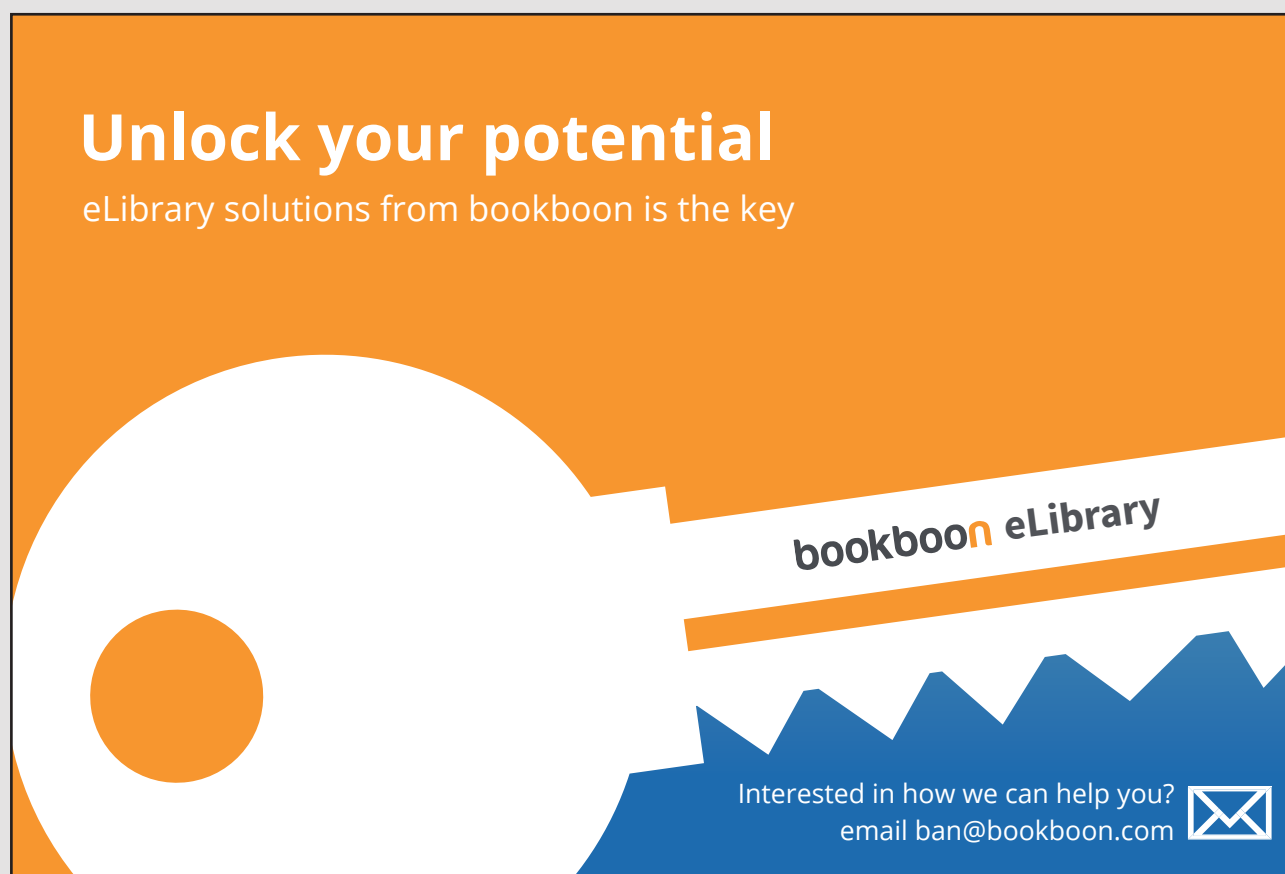
All religions have their mystical traditions or subdivisions. These include the Jewish Kabbalah, Muslim Sufis and Christian mystics. Some religions, such as Buddhism, Hinduism and some aboriginal religions, can be considered essentially, or largely, mystical.

Though commonly associated with religion, mystical experiences involve genuine neurological events that are also experienced by non-believers, including agnostics and atheists. It is that the experiences are often interpreted by the experiencer as being transcendental reality that it is associated with religion. Mystical experiences are the genesis of religions.

Mystical experiences have been experienced throughout human history, and many people today have them, whether in religious or secular life. According to a 2009 Pew survey, 49% of respondents said that they had a religious or mystical experience, defined as a “moment of sudden religious insight or awakening.” Those who said they experienced them included the young and old, religious and non-religious. (Reference: ‘Frequency of spiritual/religious experiences’ religious naturalism.org).

During mystical experiences, people feel connected to a transcendent reality and often describe gaining profound knowledge and insights. The experiences involve changes in perception or sense of time, space and reality. Time seems to slow or cease to exist, the sense of self and ego dissolves, and they feel one with the environment or universe.

According to Andrew Newberg MD, professor of medicine and religious studies at the University of Pennsylvania, the experiencers perceive the physical world in a much more vivid and intense way, as if their senses are heightened ([reference: medium.com](https://medium.com)).

The advertisement features a large white key shape on an orange background. The key's shaft is a white banner with the text 'bookboon eLibrary' in black and orange. The key's head is a white circle with an orange circle inside. Below the key, a blue jagged line represents a mountain range. In the bottom right corner, there is a white envelope icon next to the text 'Interested in how we can help you? email ban@bookboon.com'.

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The following is famed primatologist Jane Goodall description of her mystical experience:

“Lost in the awe at the beauty around me, I must have slipped into a state of heightened awareness...It seemed to me, as I struggled afterward to recall the experience, that self was utterly absent: I and the chimpanzees, the earth and trees and air, seemed to merge, to become one with the spirit power of life itself...Never had I been so intensely aware of the shape, the color of the individual leaves, the varied patterns of the veins that made each one unique. It was almost overpowering.” (reference: [medium.com](https://www.medium.com))

In his landmark book *The Varieties of Religious Experiences*, Harvard University philosopher and psychologist William James write that the experiences are beyond words. They cannot be fully explained or communicated to others, just experienced.

German Lutheran theologian Rudolf Otto similarly said that the mystical experience is *a-rational*, meaning it is a direct experience and not to be explained with reason. (Reference: [Mystical Experience/ Rudolf Otto](#))

Videos:

The following is an audio discussion about the nature of the mystical experience from British philosopher Alan Watts: [Alan Watts - The mystical experience](#)

The following is interview with people who have had mystical experiences: [“Enlightened Beings Share Their Awakening, Mystical Experiences”](#)

6.2 METHODS FOR OBTAINING MYSTICAL EXPERIENCES

Mystical experiences can happen spontaneously and without intention for both the religious and secular. However, there have also been intentional efforts to produce them, including via religious and secular practices.

Religious mystical ceremonies often involve meditation, music, chants, shamanic drumming, dance or such to achieve a trance-like state. For believers, these ceremonies are typically coupled with a way of life, including good living, morality, discipline, freeing oneself from lust and greed and anger, having feelings and actions of kindness, charity. Meditations, reciting mantras, focusing the mind on the higher power are supposed to be a part of daily life. For Jews, the daily life, every event, is supposed to be treated as holy. For many aboriginal

tribes, living in harmony and reverence with nature, which they consider holy, is a part of their life. Having a practiced, undistracted, meditative mindset is important to achieving mystical experiences, even for the non-religious. For example, serious non-religious people meditate daily, often multiple times daily, while also being mindful throughout their day.

The following are just a few examples of religious mystical practices and ceremonies.

The **Mevlevi Sema ceremony** is a Muslim Sufi ceremony with music, singing, dancing, poetry and other rituals. The participants try to purify the soul and connect with Allah. They can enter different physical and mental states, in particular during the dancing.

A famous sufi dance involves the Whirling Dervishes. The below two videos show the dance and give a Muslim interpretation of them:

Video: [Whirling dervishes in Istanbul](#)

Video: [Whirling Explanation by Shaykh Hisham Kabbani](#)

Hindu Yoga involves mental, physical and spiritual practices. Coupled with a proper lifestyle, they are designed to get the person to the mystical state of enlightenment, the ultimate goal of the religion. There are four methods of Yoga, each designed for the different personality. Hinduism is modern in that it appreciates that people learn and experience things differently.

Video: [Four paths of yoga](#)

The **Sun Dance** is a ceremony of some American Indian tribes of the United States and Canada, primarily the Plains tribes. It involves the community gathering to pray and make personal sacrifices.

Video: [The Sundance Ceremony](#)

Catholic mystical prayer is meditative prayer that Catholics say they use to expand the mind and commune with God:

“Contemplative prayer has the tendency to become ever simpler and more silent. As we gain experience in this form of prayer we need fewer and fewer thoughts, until finally one single thought may be sufficient to find the way to truth and God. Fewer thoughts demand fewer words. St. Francis used the phrase “My God and my all” as his theme

of contemplation for a whole night. . . . In contemplation our mode of thinking changes. From its usual restlessness it becomes a quiet beholding and a comprehending, a watching and a witnessing. Our voice changes: it becomes softer and lower. Finally, speech dies down and its place is taken by a silent regarding and longing between the soul and God. If we should reach this stage in contemplation, we should not force ourselves back into the diversity of thought. When simplicity contains the essence, there is no need for diversity; when silence is eloquent, it is greater than words."

– 'The Art of Contemplative & Mystical Prayer' by Father Romano Guardini ([reference](#))

The **Jewish Kabbalah** is a mystical sect of Judaism that does many things to try to personally/experientially get closer to God. Judaism teaches the contradiction that God is both beyond humans, yet humans can have a connection to Him via mystical experience.

Video: Sacred Practice: Kabbalah Practice with Rabbi Lawrence Kushner: [Sacred Practice: Kabbalah Practice with Rabbi Lawrence Kushner](#)

Taoism is a mystical religion that uses many mystical practices, such as Tai Chi, to connect to the perceived flow of the universe. Taoists believe that physical movement, even in how one walks across the room, is important to become connected with 'the way' of the universe.

Meditation

Meditation is commonly associated with Buddhism and Hinduism, but is used in all religions and also by the non-religious. Meditation works to calm the conscious mind, to remove the moment to moment conscious chatter and idle thoughts that enter our minds.

The meditator uses various possible methods to clear the mind. One is to focus on a single thing-- a mantra or one's breath. A common Hindu meditation is to not focus on anything but remove external thoughts as they enter. With the mind quieted, and the conscious thoughts removed, there can be a meditative produced mental awakening. Buddha and Mohammed achieved enlightenment after lengthy periods of meditation.

All religious mystical practices involve meditation in some form or other. It can involve the meditative practice of focusing on a mantra, focused scripture reading, drumming, ceremonies, music, art, dance, even walking or eating. The counting of the Catholic rosaries

is a meditative task. Any singular repeated or focused task, even playing chess or knitting, can be meditative if it involves singular focus and removal of other thoughts.

Nearly all sacred religious scripture alludes to meditation:

"Commune with your heart upon your bed, and be silent"

– Hebrew bible

"Verily, from meditation arises wisdom. Without meditation wisdom wanes"

– Buddhism, Dhammapada

"He is revealed only to those who keep their minds one-pointed on the Lord of Love and thus develop a superconscious manner of knowing. Meditation enables them to go deeper and deeper into consciousness, From the world of words to the world of thoughts, Then beyond thoughts to wisdom in the Self."

– The Upanishads (Hinduism)



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6.3 SECULAR PRACTICES

Mystical experiences happen not only in religious settings, but secular. Many atheists and agnostics have such experiences when meditating, focusing on work, study, when in nature, and experiencing art, athletics, fasting. Some say the runner's high, or the athlete being in the zone is a form of mystical state.

"To those who do not know mathematics it is difficult to get across a real feeling as to the beauty, the deepest beauty, of nature ... If you want to learn about nature, to appreciate nature, it is necessary to understand the language that she speaks in."

– Nobel Physics Prize winner Richard Feynman on the spiritual experience of doing math

"A chess player (said) that when he plays the game, 'I have a general sense of well-being, a feeling of complete control over my world.' Similarly, a dancer told him that during her performances, 'A strong relaxation and calmness comes over me. I have no worries of failure. What a powerful and warm feeling it is! I want to expand, to hug the world. I feel enormous power to affect something of grace and beauty.'"

– Psychologist Steve Taylor ([Reference](#))

6.4 ART

"Bach is Bach, as God is God"

– Hector Berlioz



Figure 6.2 'The Fox Hunt' (1893) by Winslow Homer

Art is a common source and device to achieve mystical experiences.

"It is inevitable that inspired art and illumined writing should arouse the beginning of mystical feelings in the hearts of those prepared and sensitive enough to appreciate mysticism. But even in hearts not so ready, the dim echoes of such feelings are often aroused. This is particularly true of music. If he can lay himself open to the power of beauty in art or nature, letting it get deep inside him, he may receive an intuition or attain an experience as mystical as the meditator's."

– Paul Brunton, British theosophist and spiritualist, 'Art Experience and Mysticism', Notebooks of Paul Brunton (paul brunton.org)

The perception of art is dealt within chapters 23 and 28-34 of *Understanding Human Minds in their Limits*.

By definition, art produces a sublime experience that is more than the sum of its parts. What is telling is that art produces the experience through fiction, artificial devices and the subjectivity of the audience. It expresses things that cannot be directly expressed in reality and literalness. This is a commentary on the human mind and understanding.

"Art is a lie that takes us closer to the truth"

– Picasso

University College London neurobiology professor Semir Zeki said that, though they didn't realize it, great artists were neuroscientists in that they used angles, symbols, colors and other qualities to influence the audience's minds.

It is also telling that the artistic experience is subjective to the person. People may get similar sublime experiences, but through different artworks. As the old saying goes, art is in the eye of the beholder. This is a commentary on other religious practices that are psychologically interpreted by the individual.



Figure 6.3 Composition VI (1913) by Wassily Kandinsky. One of the first non-representational abstract painters, Wassily Kandinsky was an academic who carefully studied and theorized how colors, shapes and other qualities resonated with the viewer. He was also a devout Russian Orthodox Christian who aspired to make his paintings a spiritual experience for both himself and the audience.

6.5 DRUGS AND MENTAL CONDITIONS

Certain drugs have been shown to lead to mystical states. These include LSD, psilocybin, mescaline, peyote and marijuana. Peyote is used in some American Indian ceremonies, and marijuana is sometimes used by Hindus and Rastafarians.

Video: [Harvard psychologist and Hindu spiritual teacher Ram Dass on drugs and mysticism](#)

Video: [University of Toronto Psychology Professor Jordan Peterson on Mystical Experiences through Psychedelics](#)

Article: [Harvard Psychiatrist and Minister Walter Pahke on drugs and mysticism](#)

Some mental conditions have been associated with mystical experiences. These include some forms of epileptic seizures, schizophrenia and bipolarism.

Video: [Scientist Dr. Jill Boyle Taylor's experience after having a stroke](#)

"Ecstatic epileptic seizures are a rare but compelling epileptic entity. During the first seconds of these seizures, ecstatic auras provoke feelings of well-being, intense serenity, bliss, and 'enhanced self-awareness.' They are associated with the impression of time dilation, and can be described as a mystic experience by some patients."

– Markus Gschwind and Fabienne Picard, Neurology Department at the University Hospital of Geneva (ncbi.nlm.nih.gov/pmc/articles/PMC4756129/)

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[Link to Article on psychiatric medicine and spiritual states by psychologist Lynn Vanderpot](#)

[Link to Paper on Schizophrenia and mysticism by Joseph Parmas and Gram Henrickson of the University of Copenhagen \(Mysticism and schizophrenia: A phenomenological exploration of the structure of consciousness in the schizophrenia spectrum disorders\)](#)

[Link to Article on epilepsy and mystical experiences by University of South Carolina-Aiken philosophy professor D. B. Dillard-Wright](#)

6.6 THE DEBATE ABOUT THE NATURE, MEANING AND AUTHENTICITY OF THE MYSTICAL EXPERIENCES

While there is no debate that they involve genuine neurological experiences, there is an ongoing and ultimately unanswerable debate over what are the musical experiences: if they are authentic views of transcendent reality, merely delusory/hallucinatory states of the mind, or some combination.

6.6.1 RELIGIOUS TRUE BELIEVERS

Many religious believers believe that mystical states are authentic, direct looks into a transcendent reality and even God. They believe either that these states and knowledge are given to them by God, or the altered state involves a cleared mind that allows them to see truth.

“My most formative religious experiences were a series of mystical experiences. They began to occur in my early thirties. They changed my understanding of the meaning of the word “God”-of what that word points to-and gave me an unshakable conviction that God (or “the sacred”) is real and can be experienced. These experiences also convinced me that mystical forms of Christianity are true, and that the mystical forms of all the enduring religions of the world are true.”

– Oregon State University Professor of Religion Marcus Borg (marcusjborg.org/mystical-experiences-of-god/)

“The same dynamic takes place when God reveals Godself to women and men. At certain times in our lives, God’s gracious presence becomes manifest in our lives as God communicates God subjectivity through subjectivity. Through concrete events in our lives, or particular words-- very ordinary things-- God becomes present and palpable to us in God’s incomprehensible, inexpressible, mysterious reality. This is the pattern of divine revelations: the finite reveals the infinite, the objective reveals the subjective, what is ordinary reveals what is Mystery.”

– Stephen B. Bevans. Jesuit Priest and Professor of Theology and Culture at Catholic Theological Union, in *An Introduction to Theology in Global Perspective* (Orbis Books).

In non-theistic religions- such as Buddhism, Hinduism, Taoism, and some traditional aboriginal religions-- there is no god but an enlightenment or higher state of awareness. These can be considered constant mystical states. Jesus, Buddha, Moses and Muhammad were said to be enlightened individuals, or people living in mystical states.

In the interview, “Can We Trust Religious Experiences?” ([link](#)) Christian professor of philosophy at Talbot School of Theology, William Lane Craig, said that, even using normal logic, the religious mystical experiences could be argued to be authentic. His argument is that there are many unprovable things that we all accept as true, due to experience and innate thought. These include that the external world we perceive is real, that the past was real, that we aren’t computers run by a mad scientist, that we weren’t born five minutes ago with an implanted false memory of the past. He said our shared beliefs about these things are unprovable, yet humans accept them as self evidently true. He said people come to these conclusions using what is widely considered to be good reason and logic. He said that, along these rational lines, someone’s perceived personal experience connecting with God, coupled with that many people have these shared experiences, can just as reasonably be considered real. Craig says these mystical experiences with God probably being called real is as reasonable as the average person probably saying the external world he perceives as being real.

Of course, it could be argued that neither perception was correct, and both involve delusion and biased answers to some degree. Both views could be similarly delusory.

6.6.2 SKEPTICS

Skeptics, including some scientists, say that mystical experiences are strictly in the mind and are on the order of delusions or hallucinations. That drugs and mental illnesses can lead to them have is seen by them as proof of this. Many of these people accept the humanistic, rational point of view of the world, and accept the normal human perception of the world as accurate. Many of these skience use science as arbiter, and don't believe anything that hasn't been, or the can't be, proven by science.

Article: [“Turns out near-death experiences are psychedelic, not religious”](#)

6.6.3 THE MIDDLE ROAD

These people say that the experiences are the result of changes to the brain, but that the experiences are not hallucinations or psychoses, but different than normal sensory experiences.

Neuroscience studies of the brain support this contention that mystical experiences are different experiences of sensory information.

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During mystical experiences, the parts of the brain that are associated with filtering and translating sensory information, categorization, language, creating ideas of self, separation of self from other, perception and categorizing of time and space are reduced. The person receives the sensory information unfiltered and untranslated (or at least to a much lesser degree) by these parts of the brain. Thus, the sense of self seems to dissolve, normal categorizations and perceptions of time and space disappear, and there is a rush of sensory information.

Additionally there is often a rush of dopamine that makes the person feel great bliss. Thus, people not only get a different rush of sensory information, but an associated sense of beauty, happiness and love. Aesthetics and emotions are an integral part of humans accepting facts and ideas. (“To humans, the meaning of life, of everything, is a matter of mood.”-- Noise Music: Cognitive Psychology, Aesthetics and Epistemology”).

“The frontal lobes are the most evolved areas of the human brain, and help control and make sense of the perceptual input we get from the world. When the frontal lobes’ inhibitory functions are suppressed, a door of perception can open, increasing the chances of mystical experiences.”

– Jordan Grafman, Professor and Physical Medicine and Rehabilitation, Cognitive Neurology & Alzheimer’s Disease Center, Northwestern University Medical School ([reference: livescience.com](http://reference.livescience.com))

“When activity in the networks of the superior parietal cortex [a region in the upper part of the parietal lobe, which is a structure slightly above and behind our ears] or our prefrontal cortex [the section of the frontal cortex that lies at the very front of the brain] increases or decreases, our bodily boundaries change. These parts of the brain control our sense of self in relation to other objects in the world, as well as our bodily integrity; hence the ‘out of body’ and ‘extended self’ sensations and perceptions many people who have had mystical experiences confess to. . . . At the same time, midbrain dopaminergic pathways—key circuits in the brain that create and release the neurotransmitter dopamine—are activated to release dopamine in networks of the forebrain,”

– James Giordano. Professor of neurology and biochemistry at Georgetown University Medical Center

“Andrew Newberg believes a cause of these feelings is the reduced activity he saw in their parietal lobes, the orientation area of the brain responsible for perceiving three-dimensional objects in space. A meditator may experience a sense of oneness with all living things or unity because the reduced activity blurs the perceived lines between the meditator and other objects . . . When the parietal lobes are damaged, patients have distorted beliefs about their own bodies and are sometimes confused about their spatial orientation to outside objects. In an example from *Why We Believe What We Believe*, patients think one of their own legs is not theirs, and have been found trying to throw this other leg out of their bed. In his new book, Newberg cites a study led by Dr. Brick Johnstone that found that damage to the right parietal lobe caused patients’ self-transcendent experiences to increase.” ([Reference: theatlantic.com](http://theatlantic.com))

“This suggests that these spots may be linked to inhibitory cognitive functions, and a suppression of these functions, which typically help us regulate and resolve our perceptual experiences, appears to open up a ‘door of perception’, exposing people to more mystical experiences.”

– Dr Irene Cristofori from the Rehabilitation Institute of Chicago and French National Centre for Scientific Research ([reference](#))

The psychedelic drugs can do this. American Indians practitioners say that the peyote is not the source of the vision or mystical knowledge, but used to cleanse the mind for them to have the experience.

“Sometimes we ask the peyote to help us cleanse the illnesses away and cleanse our mental being, our spiritual being, And we believe that’s what peyote does, too. That’s why we call it a sacrament, a sacred herb.”

– Navajo High Priest Fred Harvey ([reference: npr.org](http://npr.org))

“The Peyote Sacrament and Its Way is part of the Great Mystery. Its focused agenda is for the maturing of the soul. Peyote’s unique abilities can cut through any resistance, whispering to the inquisitive heart a fundamental question at the core of every soul’s experience, “What are we? Indigenous people of North and South America have a long, rich tradition of experiencing themselves as part of all that

we see. There is no separation between our surroundings and us. Intelligence is experienced to be in and through all things...birds, bees, rocks, trees, plants and water...the list includes all of Creation."

– Kevin 'He Who Has Know Name' Towt, President of Oklevueha Native American Church of Orderville and Toquerville ([references: nativeamericanchurches.org](http://nativeamericanchurches.org))

In his book *Waking From Sleep* (Penguin Random House, 2010) Leeds Beckett University psychology lecturer Steve Taylor writes that schizophrenics have unfiltered sensory information--heightened senses, more information--, but without the normal conscious cognitive functions that organize it. In the book, a woman with schizophrenia said that schizophrenia is great for painting and writing poetry, but she can't drive a car because she notices all the details in and to the side of the road (the crack in the road, a leaf, etc).

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6.7 MYSTICAL EXPERIENCES DEMONSTRATE THE ARTIFICIAL COGNITIVE CONSTRUCTS OF THE HUMAN MIND

This all points to that the standard human perceptions of time, space, categories, labels, linguistic explanations, rationality are artificial constructs of our mind. The mystical experiences are unfiltered, or less filtered. There is no separation of things, language and categories and labels don't apply. *Understanding the Human Minds and Their Limits* shows how language, categories and labels are not only limited but arbitrary. Mysticism is a method to try to free one of these artificial constructs.

As the *Understanding the Human Minds and Their Limits* showed, the conscious structures, arbitrariness and labels are required for function and survival of the species, but should not be confused for reality or objective truth. In fact, function requires false beliefs, arbitrary rules and distorting information. This is only in part because the human mind needs attention to function and function requires rules and focus, even if delusory or arbitrary. So the conscious mind is in part designed to fool and lie and hide facts from the mind and make artificial rules and constructs. And mystical experiences remove or suppress these, and people who have had mystical experiences suddenly see the falseness of these traditional perceptions.

In *Awakening from Sleep*, Steve Taylor writes that mystical experiences contradict ordinary consciousness in three ways:

"As we see, the experiences tell us that our normal view is false. This strong ego structure has given us some massive benefits, such as greater powers of abstract thought (when we analyse, deliberate and plan) and greater conceptual knowledge (e.g., knowledge of the laws of nature, of the structure of matter and of the universe self. It has also given us more personal autonomy, leading to more control over our life. But in a sense the ego has become over developed. Its boundaries have become too strong and its self-reflective ability has muted into the chaotic thought-chatter that runs through our mind whenever our attention isn't occupied."

Many ancient mystical religions, such as Sufism, Buddhism and Hinduism, discuss the cleansing of the mind, ridding oneself of normal mind chatter and categorization and labels in order to perceive reality. This was before science learned what was going on in the mind.

American religious philosopher Huston Smith said that we are divine within, as there is divinity without, but that we can be like a dirty lantern with caked on soil that masks the

light. He said it is an endless quest to keep the surface of the lantern clean. (Reference: [Huston Smith: Psychology of Religious Experience](#))

University of Pennsylvania's Andrew Newberg says that our epiphanies, the small 'aha!' moments, are moments of mystical clarity. The person is suddenly seeing things from a different perspective, seeing the big picture, and things fall into place in the mind.

6.8 THE MYSTICAL EXPERIENCE IS EXPLAINED THROUGH ONE'S CULTURE, LANGUAGE, BELIEFS, SENSORY ABILITIES, BIOLOGY

Even if the mystical experiences of people are very similar, the individual interpretation and explanations are influenced by the individuals background, culture and beliefs.

In his book *Religious Experiences* (University of California Press, 1985), Columbia University philosophy of religion professor Wayne Proudfoot writes that mystical experiences are explained in a religious framework, and that the framework is unconscious. A Christian may say they the Christian God, a Muslim Allah, and an atheist a secular vision.

In his book *Mysticism and Philosophy*, Princeton University philosopher Walter Terence Stace says that mysticism is perception not interpretation, and that only after the mystical experience is the interpretation made.

Psychologist Carl Jung discussed how much of our cognitive ordering, how we feel and react to a situation, is evolutionarily ingrained in us. The mythical archetypal visions of hero, tree of life, mother, birth, death, wise old man, are ingrained in our minds, shared by most humans, and thus theoretically appear in mystical visions across many cultures.

And, as is apt to happen, some will interpret the particular path they took to achieve the mystical state (ceremony, religion, artwork, other) to be the 'correct' if not 'only true' path to enlightenment. It is like people who try to 'objectively' identify the best art, when the artistic experience is subjective.

6.9 EVEN BEYOND THESE DIFFERENCES CAUSED BY THE BELIEFS, THESE EXPERIENCES ARE STILL NOT PROVABLE OF TRUTH

Even though these experiences point to our normal views of realism being artificial and arbitrary constructs, that does not mean the mystical experiences are 'truth' or 'reality'-- though many claim they are.

The experiences are experiences. They may be less formed by the artificial cognitive constructs of our mind, but they are still formed by the limits of our senses, our biology. They are still a limited sensory view. There is no way to know this heightened sensory experience is 'truth' or 'reality.'

In the beginning and in the end, they are experiences. Trying to interpret them, assign meaning, translate them into language, communicate what they are to others, is at odds of what they are. It is fine to have an opinion about what is this experience-- but realize that it is just that, an opinion. Humans want explanations for events, but not only cannot there be an language explanation, the rational or intuitive translation itself is opposed to the experiential nature.

It is interesting to note that theologians say that God or higher reality is both beyond human and comprehension and not. An oxymoron. They discuss how God and reality is beyond human language, logic, conception and human constructs, but that one can have a personal relationship or experience with it (mysticism). They also talk how God or transcendental reality cannot be understood intellectually but through the personal mystical experience. They say the mystical experience is a matter of being viscerally/experientially aware of it. They see the mystical experiences as truth, which is debatable, but are sharply aware of the dual nature of the mind and thinking. Look at the competing quotes from the Koran:

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"No vision can grasp Him. He is above all comprehension."

– Quran

"Allah as close to a man as the vein in his neck."

– Quran

Mystical experiences are good by offering different viewpoints to show that our normal view is arbitrary and false, and that there are different ways to look at things. This itself is mind expanding. But in the end they are just experiences and there is no proof or real reason to think of them as 'true.'

6.10 WHETHER REAL OR NOT, MYSTICAL EXPERIENCES CAN BE LIFE CHANGING

Whether or not they are truthful looks at reality, the mystical events can change people's lives and help their lives. Even if they are not insights into objective truth, they can give people new perspectives on things, new perspectives on their lives. They can make one reflect on the artifice of one's life and society, put things into different perspective.

"Mystical experiences are events that can shake up your world in a single moment. They can also help us 'on the way out'; we exit them 'transformed,' meaning that the insights into our personal life or our very sense of being are deeper and sharper after them."

– Andrew Newberg MD, University of Pennsylvania.

One should also not merely try to expand one's mind through the rare mystical experience, but through daily work. This includes meditation or helpful spiritual practices, and paying attention to the world. 'Stopping to smell the roses' may not induce a mystical state, but it is a daily practice that opens the mind and keeps things in perspective.

"There are two mistakes you can make. One is that you're too afraid of them, so you don't allow them at all in your life, you're terrified of letting go of control. The other mistake is that you're really attached to them, so you're constantly searching for a high. It's about finding a place for these experiences in your life."

– Jules Evans, research fellow at Queen Mary University of London's Centre for the History of Human Emotions

6.11 SUMMARY: KEY POINTS OF CHAPTER

Mystical experiences are altered from normal states of consciousness where it seems to the experiencer that one has an expansive view or experience of the universe. The normal perception of time, categorization and space dissolve, and the senses seem more heightened. People often think they receive great insight and sublime knowledge.

Mystical experiences can happen unintentionally, and happen to both the religious and non-religious. There are many ceremonial and other methods to try to achieve them. These include religious art, music, meditation, drugs. Meditation, or meditative states, is a common strain.

Mystical experiences involve genuine neurological changes in the brain. During the experiences, the normal cognitive filters are lowered that allowed a heightened, relatively unfiltered experience of sensory information. This is often coupled with a dopamine rush that give a good feeling and association.

There are debates about the the authenticity and what the experiences mean. True believers believe them a genuine look into reality, transcends reality and even God. Skeptics say they are just delusions on the order of hallucinations. Those in between say they are genuine sensory experiences when the filters are removed, but assign no special or 'higher' meaning to them.

These experiences show that the normal human concepts of labels, categories, self and time are artificial constructs of the mind.

To the human, the mystical experiences are just sensory experiences. They cannot be explained or interpreted accurately-- because that is at odds with the sensory experience. The 'truth' or 'meaning' cannot be known. Plus, the sensory information is still filtered and formed by human sensory capabilities and biological methods.

These experiences can expand the mind, by giving new experiences, by showing the shallowness of our normal thought and ways of thinking. However, they are still channeled by our mind and senses and are unverifiable.

6.12 FURTHER READING

[Article: "Ho does neuroscience explain spiritual experiences"](#)

[Stephen Hawking's Views on Mysticism and Science](#)

[Article: “Brain origins of mysticism found”](#)

[Article on runner’s high](#)

[Article: “Neurotheology: Where religion and science collide”](#)

6.13 QUESTIONS

- Have you had a mystical experience? If so, explain it. How did it/does it affect you?
- What are your opinions about mystical experiences? What is your opinion about their authenticity? Are there any points in this chapter with which you disagree?
- Do you think mystical experiences are important? Is honing them important for expanding the mind?
- How do you think mystical experiences relate to the topic of this book? Do they serve to expand the mind? If so, how?
- Do you believe in a transcendent reality beyond humans?



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7 ORGANIZED RELIGIONS

This brief chapter illustrates the problems and challenges in translating and incorporating certain intuitive knowledge and experiences, such as mystical experiences, into real world organizations and structures. The example here is mysticism and organized religion, but this is representative of most any large organization or movement.

“Institutions are not pretty. Show me a pretty government. Healing is wonderful, but the American Medical Association? Learning is wonderful, but universities? The same is true for religion... religion is institutionalized spirituality.”

– Religious philosopher and professor Huston Smith
(Mother Jones 1997)

After a lengthy chapter on mysticism, it would be amiss to not to include at least a short chapter on organized religion. Mystical experiences are the genesis of religions. The religious dogmas and structures are built around these experiences, used to try to explain and interpret them, along with giving guidance to humans on how they can achieve, live and try to understand things.

With his theory of Pluralism, influential religious philosopher and Presbyterian Minister John Hick believed that if different religions have genuine views into transcendent reality (and he believed that they have), these views are filtered through each religion’s/people’s culture, time and place in history, political happenings, language, sentiments and artistic traditions.

“In the late 1960s, Hick had (a) set of experiences that dramatically affected his life and work. While working on civil rights issues in Birmingham, he found himself working and worshiping alongside people of other faiths. During this time he began to believe that sincere adherents of other faiths experience the Transcendent just as Christians do, though with variances due to cultural, historical, and doctrinal factors. These experiences led him to develop his pluralistic hypothesis, which, relying heavily on Kant’s phenomenal/noumenal distinction, states that adherents of the major religious faiths experience the ineffable Real through their varying culturally shaped lenses. ”

– David Cramer, Religious Studies Dept., Baylor University
([reference](#))

Hick knew how human minds work, and that the broader reality and universe are beyond human conception and senses and had to be translated for humans to grasp. The translation is via language, culture, aesthetic norms, sentiments and social standards. The sacred texts are composed by people for people and their understanding and learning, written in human language and cultural sensibilities. Jesus and Buddha used instructional parables humans could understand and relate to. Hindu texts and art uses symbols and deities to represent higher reality. Organized religions and their scriptures are human products and artifacts, and are inherently human-centric with all the associate issues that come with human-centrism and human methods of sensing and thinking.

As discussed in *Understanding Human Minds And Their Limits*, humans need arbitrary rules and even falsehoods to achieve attention in order to function. These different religions have devices-- iconic representations of higher reality, ceremonies, stories, art, habits-- that are useful as methods to achieve mystical experiences and as symbolic languages to explain things. However, they are arbitrary and subjective. And, for them to work, the followers must have faith in them-- faith is a requirement for these the mind to work. This is the nature of humans.

Further, most religions aren't just about mysticism, but about practical function on earth. They teach how to live, interact with people, organize relationships and society. Thus, they will have arbitrariness of any functional teachings and organizations.

Many religions become large, part of the government and social structures and laws. Many religious organizations have accountants, human relations people, organizational psychologists. In these instances, they in part move apart from the mystical center. In most large organized religions the mysticism is just subset or part of the religion, with much of the rest being about 'administration.'

Organized religions are complex, multi-layered, multi-priority things. They are about both the individual mystical connection to transcendent reality, and the practicalities of daily life and running/ordering communities. These often conflict with each other.

All of these issues of organized religions-- translating the esoteric into human language, making arbitrary and artificial rules for function, dealing both with the esoteric and practical function, that things are corrupted and changed and altered by society, politics, different aims-- are examples of issues that happen with all human endeavors. The translating of the mystical or theoretical to the 'real world' is an impossible task. Organized religion is a microcosm of many organizations and movements. Even the expansion of the mind takes into consideration other concerns-- ethics, real world living, cost, how it affects others, physical and health effects, politics. This is why this chapter is included.

7.1 FURTHER READING

[John Hick's Religious Pluralism](#)



8 EASTERN VERSUS WESTERN PSYCHOLOGY: INTRODUCTION

"A philosopher or scientist can no more move beyond his own psychology than he can move beyond being human."

Psychology, or the study of the human mind and brain, is a natural and essential area to study the human mind and expansion. Not only are we talking about the mind, but the mind is the tool that we use to process reality. Further, understanding our own minds is part of expanding it. Knowledge and understanding, including of the self, is expansion of the mind.

The East (Hinduism, Buddhism, Jainism) and West (Western academia, science, medicine) offer two different and illuminating approaches to the study of the mind, and are emblematic of philosophical and epistemological study of the brain. They approach the brain differently, looking at things at different levels and have their own benefits and limitations. In the end and as the left and right hemispheres of the brain do, the two approaches should compliment each other, and each has influenced the other.

9 EASTERN PSYCHOLOGY

"After Self-Realization, one does not regard any other gain superior to Self-Realization."

– The Bhagavad Gita (Hinduism)

9.1 INTRODUCTION

Psychology, both Eastern and Western, are important areas of understanding things and expanding the mind. This chapter looks at the intuitive, some say mystical or spiritual, Eastern psychology (Buddhist, Taoist, Hindu), while the next chapter looks at the empirical, academic Western psychology. They are different, and at best complimenting, studies of the human mind. Both have their limits.

Eastern psychology is tied into the Eastern philosophy and theology, is more subjective and inward looking than the academic West's scientific approach, and, thus, differs in many ways. It works to serve not just the mentally troubled, but everyone. It attempts through many methods and processes-- meditation, yoga, tai chi, mindfulness, personal introspection-- to bring the individual to higher consciousness and enlightenment, which shows how it is intertwined with the religion and philosophy.

9.2 EASTERN PSYCHOLOGY, PHILOSOPHY AND RELIGION AS ONE NOT SEPARATES

In the West, psychology is separate from other sciences, religions and often even philosophy. Traditionally it is considered bad, and even unethical and unscientific, to mix them together. Some in the West consider theology and science to be like oil and water.

In the East, however, philosophy, psychology, theology and the way of life are all mixed together, and considered parts of one whole.

"If we look deeply into such ways of life of Buddhism and Taoism, Vedanta and Yoga, we do not find either philosophy or religion as these are understood in the West. We find something more nearly resembling psychotherapy"

– Philosopher Alan Watts, *Psychotherapy East & West*
(New World Library)

If you know Buddhist, Taoist and Hindu philosophy and techniques for enlightenment and leading a proper religious life, you essentially know their psychology. Buddhism is about clearing and expanding the mind through meditation, mindfulness and proper living, which is both a philosophical and psychological methodology. Same with the yoga and meditation of Hinduism, and the Tai Chi of Taoism. It is about mystical awareness.

“Buddhism also is the most psychological of religions. It is significant that the intricate workings of the human mind are more fully dealt with in Buddhism rather than in any other religion and therefore psychology works hand in hand with Buddhism than with any other religion. Is Buddhism related to modern psychology? one may ask. Yes, but with some differences . . . Buddhism is more concerned with the curative rather than the analysis. Psychology helps us to understand life intellectually. Meditation goes beyond the intellect to the actual experience of life itself. Through Meditation the Buddha had discovered the deeper universal melodies of the human heart and mind.”

– Anne Ihnen, Psychotherapist. (Purify Mind)

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“If you were to go by the stream of psychology and neuroscience books published over the last two decades, you’d think Buddhism is an intricate philosophical system designed by a man with a keen insight for the emergence of psychoanalysis and philosophy some 2,400 years down the road. Indeed, Buddhism lends itself to emergent sciences in ways no other faith has. In fact, many modern thinkers, including Sam Harris and Stephen Batchelor, question if faith is even necessary to understand Buddhism. The question of faith is one Siddhartha Gotama generally avoided.”

– Derek Beres (bigthink.com)

“While, generally speaking, Western psychology tends to not have much relevance to religion, Hindu psychology is directly connected with religion. Its aim is to help people experience God or the indwelling Divine Spirit. The materials of Hindu psychology are scattered all over the scriptures and religious philosophies of Hinduism. Most contributors have come from Hindu Sages and Saints . . . Hindu psychologists hold “that there is a permanent receptacle of the residues of experiences which is the mind.(2) “Mind in Hindu psychology is called the inner instrument or antahkarana in Sanskrit. As this inner organ becomes conscious by borrowing consciousness from the only source which is Brahmin or Divinity. Divinity is all pervading. It is present behind everything and every being. ”

– Hindu Philosophy Of The Mind And Consciousness,
Henry Swift ([reference](#))

Really, Eastern psychology is a mystical reflection and exploration. Buddhists regularly talk about the shallowness of symbolic language, categorization, labels.

9.3 EASTERN PSYCHOLOGY FOCUSES ON EVERYONE, NOT JUST THE MENTALLY ILL OR TROUBLED

While traditionally Western clinical psychology and psychiatry were designed for the treatment of the mentally ill or people having troubles, Eastern psychology was designed for everyone, including the normal and healthy. Eastern psychologists say that a problem with such Western psychology is that it applies its conclusions for treating the mentally ill to everyone, which they feel is an incorrect approach.

Buddhist, Hindu and Taoist philosophies are designed to bring normal people into higher states of enlightenment and knowledge of the universe, being of better conduct and living better lives, and being harmonious with the universe. Eastern psychological techniques--mindfulness, meditation, self reflection, yoga, self reflection-- are for everyone, not just the mentally troubled.

In recent years, Western psychology has caught on to this, as evidence by the integration of Eastern psychological practices of mindfulness, meditation and yoga into clinical psychology and daily life, along with the field of positive psychology.

“Positive Psychology is the scientific study of the strengths that enable individuals and communities to thrive. The field is founded on the belief that people want to lead meaningful and fulfilling lives, to cultivate what is best within themselves, and to enhance their experiences of love, work, and play.”

– Positive Psychology Center at the University of Pennsylvania (<https://ppc.sas.upenn.edu/>)

“Positive psychology is the study of happiness. Psychology has traditionally focused on dysfunction—people with mental illness or other issues—and how to treat it. Positive psychology, in contrast, is a field that examines how ordinary people can become happier and more fulfilled.”

– Positive psychology, Psychology Today ([reference](#))

9.4 EASTERN PSYCHOLOGY IS ABOUT LOOKING INWARD AT THE SELF

“As by knowing one tool of iron, dear one, We come to know all things made out of iron. That they differ only in name and form, While the stuff of which all are made is iron, So through spiritual wisdom, dear one, We come to know that all of life is one.”

– The Upanishads (Hinduism)

“The little space within the heart is as great as the vast universe. The heavens and the earth are there, and the sun and the moon and the stars. Fire and lightning and winds are there, and all that now is and all that is not.”

– The Upanishads

Hinduism and Buddhism were well ahead of their time, at least compared to Western psychology and science, in that they focused on the inner self, studying one's own mind. That was the center of study and spiritual practice, and one's inner self laboratory of psychological experimentation. Hinduism and Buddhism consider one's self a reflection or microcosm of the universe. Also, from a practical standpoint, it is all we one can really study and know.

"Ancient Indian philosophy says that man is the microcosm of the Universe. The Universe is referred to as the brahmanda (i.e. Egg of Brahma) and Man is referred to kshudra-brahmanda(i.e. Little Egg of Brahma). The Greeks also believed in the same concept"

– Integral Yoga of Sri Aurobindo

This reflection and study of the self is intuitive and subjective. This goes against the tenets of the West's scientific method. However, the East sees the limits of the Western psychology that only studies only that which can be objectively and externally measured. There is much in psychology, in the self and the universe that is personal, unmeasurable and unquantifiable: emotional feeling, aesthetic experience, mystic experience, much of the religious experience. Much of the universe is beyond science and even human logic and symbolic language. Mysticism attempts to become closer with the transcendental universe in personal, a-rational ways.



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“A central feature of Buddhist psychology is its methodology, which is based on personal experience through introspection and phenomenological self observation. According to the Buddha while initially unreliable, one’s mind can be trained, calmed and cultivated so as to make introspection a refined and reliable method. This methodology is the foundation for the personal insight into the nature of the mind the Buddha is said to have achieved. While introspection is a key aspect of the Buddhist method, observation of a person’s behavior is also important.”

– Alchetron.com, “Buddhism and Psychology” (alchetron.com/Buddhism-and-psychology)

While early Western psychology shied away from introspection and personal subjectivity, this Eastern study of the inner works of the mind was centuries ahead of Western psychology’s cognitive psychology that used scientific methods to study the inner workings of the mind. In fact, the West’s behaviorism and structuralism intentionally avoided the ‘untestable’ inner workings of the mind, and were criticized even by Western psychologists for this blind spot. That something cannot be scientifically studied, or that you choose to ignore it, doesn’t make it non-existent or unimportant. It makes the study unwhole.

It is true that this exploration is subjective to the person, and this is a limit and a problem. However, the human experience, all human experience, is subjective and the studying of this subjectivity is important to understanding humans. And while it is limiting and corrupting, it is also a path that the Eastern psychologists take to expand their mind. All explorations and modes of study-- all attempts to expand the mind-- have limits and problems.

9.5 EASTERN PSYCHOTHERAPY

Along with studying and reflection on the inner workings of the mind, early Eastern psychology had many clinical psychology and cognitive therapy methods that are used today in the West.

The following are cognitive therapy methods used by Hindus:

“Fear reduction by graded exposure and reciprocal inhibition; using rewards for promoting desirable behavior; modelling for inducing behavioral change; the use of stimulus control to eliminate undesirable behavior; the use of aversion to eliminate undesirable behavior; training in social skills; self-

monitoring; control of intrusive thoughts by distraction, switching/stopping, incompatible thoughts, and by prolonged exposure to them; intense, covert, focusing on the unpleasant aspects of a stimulus or the unpleasant consequences of a response, to reduce attachment to the former and eliminate the latter; graded approach to the development of positive feelings towards others: use of external cues in behavior control; use of response cost to aid elimination of undesirable behavior; use of family members for carrying out behavior change programs; and cognitive-behavioral methods--for example, for grief."

– Padmal de Silva, lecturer in psychology at the Institute of Psychiatry, King's College.

"Letting go gives us freedom, and freedom is the only condition for happiness. If, in our heart, we still cling to anything - anger, anxiety, or possessions - we cannot be free."

– Thich Nhat Hanh, *The Heart of the Buddha's Teaching: Transforming Suffering into Peace, Joy, and Liberation*

In the video 'The Roots of Buddhist Psychology,' Buddhist psychologist and meditation expert Jack Kornfield talks about the Buddhist method that intertwines practices such as mindfulness, meditation and introspection with moral and ethical living of loving kindness, charity and environmentalism. He says one should work to rid oneself of delusions, and realize that all one needs is in the self. One key method is to mindfully watch how one reacts to situations-- what triggers anger, sadness-- and observe what one really feels. The goal is to be aware and fix things as needed. A key is to be open and not avoid painful thoughts or bad things about the world. Awareness and enlightenment are keys both as a philosophy and cognitive/clinical therapy. Kornfield says one should rid oneself of the ego (a delusion), or at least see it for what it is. And he says true enlightenment is when the mind and the universe are inseparable. As you see, Buddhist psychology and philosophy are one.

"When the stories of our life no longer bind us, we discover within them something greater. We discover that within the very limitations of form, of our maleness and femaleness, of our parenthood and our childhood, of gravity on the earth and the changing of the seasons, is the freedom and harmony we have sought for so long. Our individual life is an expression of the whole mystery, and in it we can rest in the center of the movement, the center of all worlds."

– Jack Kornfield, *A Path with Heart: A Guide Through the Perils and Promises of Spiritual Life*

“When we let go of our battles and open our heart to things as they are, then we come to rest in the present moment. This is the beginning and the end of spiritual practice. Only in this moment can we discover that which is timeless. Only here can we find the love that we seek. Love in the past is simply memory, and love in the future is fantasy. Only in the reality of the present can we love, can we awaken, can we find peace and understanding and connection with ourselves and the world.”

– Jack Kornfield, *A Path with Heart: A Guide Through the Perils and Promises of Spiritual*

The Taoists believe that one should live in harmony with nature, and its psychology works to fix bad habits and thoughts that prevent this.

“As we have seen, a similar idea plays an important role in Taoist philosophy. Like modern day psychologists, the ancient Taoists came to realize that a set of deeply seated motivations underlie our daily actions. These motivating forces remain hidden, yet actively work to determine our behavior. As part of Taoist philosophy, Taoist teachers agree

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that as we age, we learn to accept certain ideas and beliefs about ourselves and others and about how the world works in general. Once we have accepted them, they become part of us, and we refuse to modify them even if they are absolutely wrong. Over time, these ideas sink to the back of our minds, and while they still influence our thinking processes, we are no longer aware they even exist. In this way, our hidden human motivations can indeed determine our everyday patterns of thought and behavior. The basic problem with these hidden values is that they are unnecessarily restricting and can even be dangerous. Eventually, they can manifest as a pathological condition."

– people.howstuffworks.com/taoist-philosophy3.htm

Much Taoist psychology work is beyond words, such as Tai Chi. Taoists believe it is not just words and thoughts that are important, but even the way one moves, even walks across a room. This is mystical.

"In terms of the physical, we learn to be inflexible and awkward in our movements. Over time, this state negates the natural athletic abilities most of us possess as children. While psychologists use language to talk out problems, Taoists are very aware of the limitations of language.:

– [https://people.howstuffworks.com/taoist-philosophy3.
htm](https://people.howstuffworks.com/taoist-philosophy3.htm)

But, again, as with Buddhism and Hinduism, Taoism isn't just trying to deal with normal living, but to raise one's mind and consciousness to a higher, beyond-normal level. This is how it ties into its theology.

"There is a still higher plane upon which the mind can work, It can go beyond consciousness, Just as unconscious work is beneath consciousness, so there is another work which is above consciousness, and which is not accompanied with the feeling of egoism. The purpose of Hindu philosophy is to help people attain spiritual enlightenment through Samadhi. And to achieve that goal subjective and intuitive methods alone are employed. So-called objective methods are not used because experimental and inferential methods depend on human interpretation, which can easily be colored by the minds of the interpreters. And as such, they cannot be called purely objective. As no knowledge can be acquired without mind, great emphasis is put by the Hindus

on improving the quality of the mind. Hindu psychology prescribes techniques to improve the quality of the mind by making it pure. A pure mind alone can have superconscious experience or the experience of Samadhi. Hindus developed psychology out of studying religious methods of achieving superconsciousness. To Hindus, religion is not a barrier to psychology but the basis. The goal is healthy religious expressions and experiences of enlightenment."

– people.howstuffworks.com/taoist-philosophy3.htm

9.6 EASTERN PSYCHOLOGY IS CONCERNED WITH SOCIETY AND EARTH, NOT JUST THE INDIVIDUAL

While Eastern Psychology works with the individual, including teaching him or her to work on the self while living in a troubled, distracting, materialistic and often corrupt society, it also is concerned with society as a whole and the whole universe. Remember that the Eastern religions see everything as intertwined, not separate.

While Western psychology often sees mental illness as one who does not fit in with society, the East often sees the society itself as being the ill one. The East often sees that the enlightened will be seen as mentally ill by the West, because the enlightened person's thoughts and ways do not conform. Eastern psychology is concerned with social greed, corruption, war, ethnic and racial hatred, and often views them as the result of the people's errant inner thoughts.

"Many Buddhist practitioners have questioned what to do in these turbulent times. More than anything, I believe the world is in need of a spiritual perspective. The Dharma—the teachings of generosity, virtue, loving-kindness, and wisdom—are non-partisan. The benefits of dharma teachings can be used by Republicans and Democrats, by Green Party and Libertarians, by Iraqis and Israelis. The Dharma welcomes everyone and encourages all to awaken together. But how, as dharma practitioners, do we find our own place in a complex political world and find a way towards peace? Our first task is to make our own heart a zone of peace. Instead of becoming entangled in an embattled bitterness or cynicism that exists externally, we need to begin to heal those qualities within ourselves. We have to face our own suffering, our own fear, and transform them into compassion. Only then can we become ready to offer genuine help to the outside world. Albert Camus writes, "We all carry within

us our places of exile, our crimes, our ravages. Our task is not to unleash them on the world; it is to transform them in ourselves."

– Jack Kornfield (jackkornfield.com/dharma-politics/)

Duly note that when we talk about 'Western psychology' we talk about traditional white psychology. Many non-geographically Eastern aboriginal religions and beliefs are much in alignment with the East not the white west. The below is a comparison of Buddhism and American Indian beliefs.

"There is a great similarity between Native American spirituality and the Tibetan Buddhist teachings of compassion and respect for every living creature. This respect for all life is what I learned from my Cree grandmother when I was a child. There are many Tibetan teachers who come through here and I try to attend their sessions. They are grounded in the environment, and they have ceremonies similar to ours of burning cedar to invite and honor the spirits-the spirits of the mountains, the spirits of the water, the Elemental Beings and the great Thunderbird who brings the rains of purification and regeneration. The spiritual power of thunder

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and lightning is central to both Native and Buddhist traditions. These ancient traditions hold that Thunder Beings are the spiritual and physical manifestations of Spirit. Some of the Tibetan Buddhist practices and most of those of Native American are grounded in relationship to the elements and all beings. The Tibetans have a smoke offering ceremony called Sang in which you make a fire and then put juniper branches and other offerings like grains, honey and milk products to make smoke. You see the smoke from that fire turning into offerings for all beings. The Native Americans also use smoke from cedar and age for purification. For me, the sweat lodge, or Stone People's Lodge, is a bit like the Tibetan Buddhist Mandala."

– *Buddhism & Native American Practices*, Interview with American Indian Lorraine Fox Davis and Buddhist Lama Tsultrim Allione (taramandala.org)

"From Wakan Tanka, the Great Spirit, there came a great unifying life force that flowed in and through all things — the flowers of the plains, blowing winds, rocks, trees, birds, animals — and was the same force that had been breathed into the first man. Thus all things were kindred, and were brought together by the same Great Mystery."

– Lakota Chief Luther Standing Bear

10 WESTERN PSYCHOLOGY AND THE SCIENTIFIC METHOD

This chapter looks at both the Western academic approach to studying the mind (psychology), and the limits of the scientific methods both in psychology and in science in general.



Figure 10.1 American psychologist and behaviorist B.F. Skinner (credit: wikipedia)

10.1 INTRODUCTION

This chapter is a brief look at Western psychology, a relatively modern area that studies human minds and behavior using the scientific method. It studies humans using observation and measurable sensory information.

This method has produced much important information about humans and animals, but the scientific method cannot study or know about some areas, such as theology, what emotions feel like, subjective experience, mystical experience, aesthetics and other integral parts of the human and human experience.

Western psychologists and others have realized the limitations of this scientific psychology, and have integrated Eastern theology, psychology and practices, in particular into clinical psychology. Studying both Eastern and Western psychology, one comes to the conclusion that both approaches are essential, and should be integrated. It is not an either/or but a both/and.

10.2 WESTERN PSYCHOLOGY AS A SCIENCE

Unlike the centuries old Eastern psychology, Western Psychology of the academic Europe and North America is a relatively recent area, started in the mid-1800s. Western psychology is the scientific study of human minds and behavior, traditionally approaching from a strictly scientific point of view.

“Psychology is the science that studies why human beings and animals behave as they do. Psychologists are interested in understanding the whole range of human experience, including the reasons for people’s motives, thoughts, feelings and emotions. These problems have puzzled man for centuries. But the scientific study of such problems only began in the mid-1800s . . . Psychologists have learned much about behavior and experience, but they have made only a beginning. There is a great deal they know little about, and a lot to be discovered. Suppose you ask yourself ‘How does my brain function as a mind?’ You would be asking a question that has baffled investigators for hundreds of years. The question is still largely unanswered, but it is being studied by many psychologists collaboration with neurophysiologists and other scientists.”

– Hadley Cantril, Psychology Professor at Princeton University (world book encyclopedia)

As it is a science-- often coupled with biology, sociology, anthropology and behavioural science, and psychiatry is a medicine--, psychology uses the scientific empirical method that is used in all areas of Western science.

The scientific method is the process where scientists collectively and over time try to create reliably objective representations, theories and/or models of the world and the things in it. It is applied to all areas of science, including chemistry, biology, physics, engineering and medicine. In particular, it creates theories and experimentally tests them through the senses and observations. It attempts to be objective and remove the scientists’ biases, though biases can never be entirely escaped.

“The scientific method has four steps: 1. Observation and description of a phenomenon or group of phenomena. 2. Formulation of an hypothesis to explain the phenomena. In physics, the hypothesis often takes the form of a causal mechanism or a mathematical relation. 3. Use of the hypothesis to predict the existence of other phenomena, or to predict quantitatively the results of new observations.

4. Performance of experimental tests of the predictions by several independent experimenters and properly performed experiments. . .If the experiments bear out the hypothesis it may come to be regarded as a theory or law of nature (more on the concepts of hypothesis, model, theory and law below). If the experiments do not bear out the hypothesis, it must be rejected or modified. What is key in the description of the scientific method just given is the predictive power (the ability to get more out of the theory than you put in; see Barrow, 1991) of the hypothesis or theory, as tested by experiment. It is often said in science that theories can never be proved, only disproved. There is always the possibility that a new observation or a new experiment will conflict with a long-standing theory."

– University of Rochester Physics and Astronomy
Professor Frank L. H. Wolfs ([reference: rochester.edu](http://reference.rochester.edu))

The science of psychology avoids individual introspection, experimentation through subjective personal feelings, intuition. It considers many areas such as palm reading, crystals and mystic intuition to be pseudoscience. It is wary of the way lay people use personal or anecdotal experiences as proof of broader laws. They know that such personal experience is subjective and formed by personal and often irrational biases.

There are many areas, schools and specialties in Western psychology. The following shows a few major ones, demonstrating how the scientific method is used and how each area has its limitations in understanding humans.

10.3 STRUCTURALISM

In 1879 Wilhelm Wundt introduced the first formal experimental psychology, and his area of study was called structuralism. He worked to study the conscious mind-- totally ignoring the unconscious mind--, and intentionally studied it using the scientific methods he saw being used in chemistry and physics.

"At the turn of the century, many advances in science were occurring due to a fundamental concept that philosophers of science refer to as 'elementism.' Structuralism can be defined as psychology as the study of the elements of consciousness. The idea is that conscious experience can be broken down into basic conscious elements, much as a physical phenomenon can be viewed as consisting of

chemical structures, that can in turn be broken down into basic elements. In fact, much of the research conducted in Wundt's laboratory consisted of cataloging these basic conscious elements. For example, one of Wundt's research assistants might describe an object such as an apple in terms of the basic perceptions it invoked (e.g., "cold", "crisp", and "sweet")."

– Missouri University of Science & Technology
'Psychology World' ([reference](#))

An obvious limitation of structuralism is that it was limited in its study conscious mind.

10.4 BEHAVIORALISM

Another major psychology school/movement that shows both the objective scientific method and its limits was behavior psychology or behaviorism. The earlier pictured B.F. Skinner was the leader in this area.



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Behavioralism studied the outward behavior of humans and animals. It dismissed the inward personal experiences and non-symbolic thoughts of the subjects, as they could not be objectively measured. Behaviorism studied how humans and non-human animals outwardly reacted (behavior) to events, stimuli and actions, and could even be used to alter human behavior. Pavlov's dog that drooled at the ringing of a bell in anticipation of food is perhaps the most famous example.

"Behaviorism was a movement in psychology and philosophy that emphasized the outward behavioral aspects of thought and dismissed the inward experiential, and sometimes the inner procedural, aspects as well; a movement harking back to the methodological proposals of John B. Watson, who coined the name. Watson's 1913 manifesto proposed abandoning Introspectionist attempts to make consciousness a subject of experimental investigation to focus instead on behavioral manifestations of intelligence. B. F. Skinner later hardened behaviorist strictures to exclude inner physiological processes along with inward experiences as items of legitimate psychological concern. "

– Philosophy Professor Larry Hauser, Alma College
([reference](#))

10.5 LOOKING INSIDE: COGNITIVE PSYCHOLOGY

Psychologists and philosophers saw the obvious blindspot of structuralism and behaviorism: They ignored the inner experience of the mind. The inner experience is hard to study externally, but that does not make it any less real or any less important a subject.

The next major movement was cognitive psychology and cognitive science that worked to study the inner works of the mind: how the mind works, processes information, comes to judgments, the emotions, attention, etc.

"The successful 'cognitive revolution' of the nineteen sixties styled itself a revolt against behaviorism even though the computational processes cognitivism hypothesized would be public and objective -- not the sort of private subjective processes Watson banned. Consequently (and ironically), would-be-scientific champions of consciousness now indict cognitivism for its "behavioristic" neglect of inward experience."

– Philosophy Professor Larry Hauser, Alma College
([reference](#))

This area also uses the scientific method, and often incorporates biologists, biochemists, neuroscientists and psychiatrists. Along with old school testing methods, cognitive science uses MRI, brain scans to study how the brain reacts under different circumstances from sleep to art perception to fear. It may be a study of the inside of the brain, but it is no less scientific than behaviorism.

Sigmund Freud's psychoanalysis and theories have been refuted over the years, and often called pseudoscience in part because they are testable by the scientific method, but he is credited with studying the subconscious mind, and showing how it affects the conscious mind.

Structuralism, behaviorism and cognitive psychology are just three of many areas of psychological study, but show the progression of the areas of study and the use of the scientific method.

10.6 LIMITS OF THE SCIENTIFIC METHOD, INCLUDING IN PSYCHOLOGY

Science is a tool, a careful and exacting tool, but all tools have limits. With science, this includes what it can and cannot study.

Despite wishing to remove subjectivity and bias from the theories and experiments, this cannot be entirely done. The history of science is filled with sexism, racism, human-centrism, moral and other biases. It would be foolish to think they can ever be entirely removed. The human race has biases simply by being human.

Biases appear in what is studied, what are the purposes, how funding is allocated. The theories that are tested are devised by humans with their aesthetic tastes and sensibilities. Theories that fall outside of human thinking are never addressed. The testing is based on sensory information humans and their instruments can perceive, and not using what cannot be perceived or detected. Human logic and symbolic thinking are used, so the science will have these biases and myopicism.

Scientific models show the subjective and even aesthetic tastes of humans-- the standard forms, the styles, the colors used.

As British statistician George E.P. Box said, "All models are wrong, but some are useful."

Science can only study that which can be objectively observed or measured, and many real things are outside of this realm. This includes the artistic experience, the mystical experience, inner feelings, the aesthetic experience of music, emotions and internal non-symbolic

experiences. This should show the limits of Western psychology as applied to humans and the human mind.

“Clearly, the scientific method is a powerful tool, but it does have its limitations. These limitations are based on the fact that a hypothesis must be testable and falsifiable and that experiments and observations be repeatable. This places certain topics beyond the reach of the scientific method. Science cannot prove or refute the existence of God or any other supernatural entity.”

– Science educator William Harris ([reference](#))

“Religion does not have to be involved for a question to be unsuitable for scientific research. Anytime a construct that can’t be reliably measured is involved or depends for its existence on assumptions which cannot be tested, you are outside the range of the scientific method.”

– Clinical psychologist Dr. Lawrence B. Edrile ([quora.com](#))



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“Like any good scientist, you may question the range of situations (outside of science) in which the scientific method may be applied. We determine that the scientific method works best in situations where one can isolate the phenomenon of interest, by eliminating or accounting for extraneous factors, and where one can repeatedly test the system under study after making limited, controlled changes in it. There are, of course, circumstances when one cannot isolate the phenomena or when one cannot repeat the measurement over and over again. In such cases the results may depend in part on the history of a situation. This often occurs in social interactions between people. For example, when a lawyer makes arguments in front of a jury in court, she or he cannot try other approaches by repeating the trial over and over again in front of the same jury. In a new trial, the jury composition will be different. Even the same jury hearing a new set of arguments cannot be expected to forget what they heard before.”

– Physics and Astronomy Professor Frank L. H. Wolfs,
University of Rochester. ([reference: rochester.edu](http://reference.rochester.edu))

10.7 MOVING BEYOND THE LIMITS OF SCIENCE IN WESTERN PSYCHOLOGY

In recent times, people in the West have seen these limits in Western psychology, in particular in the clinical and therapeutic ways where they are dealing with real individuals with personal problems. The West has incorporated many Eastern psychology theories in practices. Meditation, self-introspection, yoga, mindfulness and acupuncture are commonplace these days in the West, including in mainstream psychology.

Humanistic psychology is a clinical psychology that values the private, subjective experience and even says it is more important to the individual. New age religions incorporate both Western science and Eastern practices.

11 SUMMARY OF EASTERN VERSUS WESTERN PSYCHOLOGY

11.1 OVERVIEW

Psychology, or the study of the mind, is an essential part of expansion of the mind.

Eastern and Western psychology study and focus on different aspects of the mind and use different methods. Each has its own scope and methodology.

Eastern psychology is intuitive and mystical in its approach and studies the self, its emotions, feelings, mystical experience of things. It is of the belief that studying the self is studying the universe--- a theory consistent with mystical experiences where things appear to be one, where there is no 'self versus other.' It studies things and addresses questions that cannot be addressed by science. However, its limits are that it is subjective and much of its findings cannot be verified empirically by science.

Western psychology uses the scientific method to study the human brain and mind. It is an exacting tool, which is its strength. However, its limits are that there are things that are beyond science, and science can only study that which can be measured and 'seen.' Further, science is a work in progress, with theories proven wrong, adapted and fixed. This is both its strength and its weakness.

Each method is limited, and both complementary and like oil and water. Such is the nature of human existence.

VIDEO: An interesting dialogue between Ram Dass and Timothy Leary, both former Harvard psychologists. You will notice that Dass has a particularly Eastern frame of mind, while Leary is decidedly Western. Leary is concerned with labels and term definitions, while Dass sees them as unimportant:

[Timothy Leary and Ram Dass Debate](#)

11.2 FOCUS: CHARLES TOWE ON RELIGION AND SCIENCE

University of California-Berkeley physics professor and co-inventor of the laser and maser Charles H. Townes won the Nobel Prize for physics. He was also devoutly religious. He felt that science and religion were trying to answer different questions about the universe,

and predicted that in the future the two would merge to give greater understanding of the nature of the universe.

Video: Charles Townes on Science and Religion [Charles Townes on Science and Religion](#)

Link: [Townes on how scientific discovery and religion have similar qualities](#)

Now watch the following video where physicist Richard Feynman discusses the intent of science versus the intention of religious speculation. Feynman was an atheist but confirms that science and religion or spirituality are looking at different aspects [Richard Feynman: "The Uncertainty Of Knowledge"](#)

11.3 QUESTIONS

- How do you think psychology is important to expansion of the mind?
- What do you think of the different approaches of Eastern and Western psychology?
- Do you think one is better to the other? Do you think they can be used together?

12 MODERN MEDICINE, TECHNOLOGY, TRANSHUMANISM AND POSTHUMANISM

“Up till now human life has generally been, as Hobbes described it, ‘nasty, brutish and short’; the great majority of human beings (if they have not already died young) have been afflicted with misery... we can justifiably hold the belief that these lands of possibility exist, and that the present limitations and miserable frustrations of our existence could be in large measure surmounted... The human species can, if it wishes, transcend itself—not just sporadically, an individual here in one way, an individual there in another way, but in its entirety, as humanity.”

– Evolutionary biologist Julian Huxley on transhumanism

“No offence to those who look after us and do it well, but perhaps medicine has already become transhumanist.”

– Emmanuel Brochier, Philosophy lecturer at IPC (Paris)
(reference: genthique.org)

12.1 INTRODUCTION

There are many current and futuristic theoretical methods used to try to ‘improve’ humans, both physically and mentally. These sometimes fall under the movements called transhumanism and posthumanism that focus on various methods to expand and sometimes even expand beyond humankind. Many people in these movements see it as a next evolutionary step.

Though many of the methods are highly futuristic, radical and sometimes far fetched, much current medicine and technology are currently being used to improve people. Medicine has long been used to treat conditions, both physical and mental.

This chapter briefly looks at some of the technical, scientific and medical methods, with the following chapters looking more deeply at the theoretical, cognitive and philosophical issues and questions. As this field is ever expanding, and the technological and medicinal future is impossible to predict, this chapter just looks at some basic areas as examples.

12.2 MEDICINE

Medicine and healthcare have a wide variety of methods to improve the mind and body. These include drugs and other treatments to treat physical and mental health, from migraines to schizophrenia, and the whole range of physical conditions. It includes knowledge on better diet and exercise and daily life practices (stress reduction, how to sleep better, meditation).

While treatments to improve mental ailment and conditions are clearly related to the mind, good physical health and the extension of life are also related to the health and expansion of the mind.

Being able to feel better, free from anxiety and pain, have mobility and experience more of life and geography, is important to thinking and expanding the mind. Mobility and social interaction give one the new experiences to expand the mind. Social interaction is essential to developing the mind. Living longer, especially in good physical and mental health, increases the chance for a person to grow mentally, learn more. Any medical treatment or healthcare that makes one healthier can serve to expand the mind over a lifetime.

Traditionally, medicine, in particular Western medicine, has been used to treat the ill, to fix disabilities and negative conditions. It has not been used to improve the normal or normally

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abled. For example, steroids are used to treat ailments and conditions, but it is considered unethical and often illegal to use steroids to improve the those without conditions.

Transhumanism and posthumanism wish to use medicine to improve the normal human, to make humans better than humans and even create a new species. Compare this with Eastern versus Western psychology, where Hindus and Buddhists wish to make normal humans, all humans, better, while Western psychology has traditionally been used to treat the mentally ill and others with disabling conditions.

One notable exception in medicine is plastic surgery used to make people look aesthetically better than normal, to remove wrinkles and double chin, create a more attractive nose. Cosmetic dentistry is another example.

Video: One hour lecture by prominent University of Washington bioengineering professor Buddy Ratner surveying new bioengineering on techniques in medicine and life extension <https://www.youtube.com/watch?v=Hx7npNiDA0U>

12.3 PSYCHIATRIC AND OTHER DRUGS TO TREAT MENTAL CONDITIONS

There are drugs to treat such diseases as Alzheimer's, dementia, Parkinson's, depression, attention deficit disorder (ADD), schizophrenia, epileptic seizures, bipolar, anxiety and other mental conditions. When they work, these have ability to expand in ways the mind of the sufferer. These drugs often have side effects and work by suppressing parts of the mind, so they can both enhance and detract from the mind. There are also other cognitive and philosophical dilemmas that are discussed in the next chapter.

Nootropics-- also known as **smart drugs**-- are drugs to try to improve memory and learning abilities, ideally with minimal or no side effects.

The most famous and common example is caffeine, used to keep awake alert, and commonly used to help study and do work. By blocking the action of adenosine, a natural brain chemical that promotes sleep, caffeine prevents drowsiness.

Other nootropics include ritalin, prescribed to treat attention deficit hyperactivity disorder but is used off label to help studying. Adderall, a combination drug containing two forms of amphetamine, and even LSD are also sometimes used. Some believe that a small dose of LSD leads to greater productivity. Piracetam is well studied and is credited by its users with boosting their memory, sharpening their focus, heightening their immune system, even

bettering their personalities. Modafinil (Provigil), armodafinil (Nuvigil), and adrafinil are used to increase focus, motivation, clarity, memory.

Many say these drugs do not per se make one smarter, but put the mind in a conducive state of mind for learning and memory. Caffeine keeping you awake and alert to study and work is an example.

"Some researchers point out these drugs may not be enhancing cognition directly, but simply improving the user's state of mind – making work more pleasurable and enhancing focus. "I'm just not seeing the evidence that indicates these are clear cognition enhancers," says Martin Sarter, a professor at the University of Michigan, who thinks they may be achieving their effects by relieving tiredness and boredom. "What most of these are actually doing is enabling the person who's taking them to focus,"

– says Steven Rose, emeritus professor of life sciences at the Open University.

"It's peripheral to the learning process itself." -

– ['The truth about smart drugs' \(BBC\)](#)

Mood altering drugs are often used, as mood is an integral part of human function, thinking and learning. Moods can enhance or disable learning and thinking. Not only does anxiety and depression inhibit thinking, motivation and function, but emotions and mood are an integral part of intuitive knowledge and decision making. The chapter on mysticism showed how drugs are used to try to expand the right sight of the mind. Extreme mood disorders can lead to delusional thinking and even psychosis.

Smart drugs do not instantly make one smart, and do not make up for an unhealthy lifestyle. Proper diet, sleep and exercise can do more for memory and learning than any drug. What the future of drugs will bring is another story.

Video: [Nootropics: Do They Work? Are They Worth It?](#)

12.4 ADD ON AND IMPLANTS

Medical implants and add ons are used today today. These includes artificial limbs, hearts and lungs, cochlear and cornea implants. They also includes eyeglasses, binoculars, hearing aids, google glasses and infrared goggles. Many of these incorporate artificial intelligence.

Links to articles:

[FDA Approves World's First Artificial Retina](#)

[Cochlear implants to give people hearing](#)

[Artificial heart](#)

Again, most of these have traditionally been about helping the ill or disabled, rather than making the normal better. However, transhumanists and posthumanists envision implants and add ons to better the species. They envision more limbs that act better, cochlear and retinal implants that give better than normal sensory abilities. To a degree this has already happened with binoculars, infrared viewers and other technology to better our normal abilities.

The computers we carry around with us have given humans revolutionary new access to information and technological abilities and can be considered 'add on' to humans,. We have great access to information, GPS and maps, language translators, health monitors. We can communicate live and via video with someone on the other side of the world. This is something revolutionary for humankind, both at the individual and societal level. The future will include the internet, computer and other technologies more and more immediately affecting humans and society. It will become more and more interwoven and integrated with the individual and society, and even humans' bodies.

12.5 EUGENICS, AND GENE EDITING AND THERAPY

There are a wide variety medical and biological methods to change human beings, their health, physical and mental makeup, and intelligence.

Eugenics have long been used in some form or other. This includes picking an attractive, tall, intelligent spouse, sport or egg donor. People who want egg or sperm donations can pick, at least theoretically, donors based on physical features, job abilities, tests scores, health backgrounds. Fertilization specialists can identify gametes (eggs) that are healthy and those that have genetics diseases or conditions.

Genome editing, or genome engineering is a type of genetic engineering in which DNA is inserted, deleted, modified or replaced in the genome of a living organism. Unlike early genetic engineering techniques that randomly inserts genetic material into a host genome, genome editing targets the insertions to site specific locations.

Link: [US National Library of Medicine How does gene therapy work?](#)

Gene editing and related can do futuristic things, such as making glow in the dark sheep and grow an 'ear' on the back of a mouse. In the future gene modification will change a human's biology, physical abilities, efficiency, stop diseases, have people live longer and healthier. Many believe these techniques can be used to increase intelligence and alter the mind.

[Article on Glow in the dark sheep:](#)

[Mouse with an ear grown on its back](#)

12.6 BRAIN-COMPUTER INTERFACES

A brain-computer interface connects the brain to a computer. This is done for many reasons, including use of artificial limbs, augmenting or fixing sensory deficiencies, mind control of devices and computers. It has helped the blind to see. This has the potential to greatly expand human physical and mental capabilities more and more in the future.

Video: [New Brain Computer interface technology | Steve Hoffman | TEDx CEIBS](#)

Article: [Mouse brain to brain communication](#)

Video: [Brain-Computer Interface - Mysteries of the Brain](#)

12.7 EXPANDING HUMAN SENSES

Stanford University neuroscientist David Eagleman works on expanding human senses. He says humans perceive less than a ten-trillionth of all light waves. "Our experience of reality is constrained by our biology." In the following Ted Talks video Eagleman discusses and shows new interfaces that allow humans to process previously unseen information. I recommend you watch it.

Video: [David Eagleman on creating new senses for humans](#)

12.8 VIRTUAL REALITY

Future virtual reality experiences will not only give better and better visuals and sound, but touch, direct cognitive and perhaps emotional/psychological experiences. There is the potential for people to be able to experience others' experiences, relive past memories and others' memories, communicate in different ways, have more 'first hand' ways of learning, experience different things-- skydiving, visiting another place of the world. Humans can potentially virtually visit places impossible for humans to visit, such as far away planets that are reached by robots. It will give lifelike experiences for the disabled.

It will help expand communication, education, knowledge, empathy, understanding and expand the mind. It will help in cognitive and other therapy, help people overcome phobias. It will help in meditation and mystical experiences. People envision being able to 'copy' people's experiences and memories in full, and have others relieve them.

Video: [MIT Explains: How Does Virtual Reality Work?](#)



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12.9 BRAIN PLASTICITY

Humans are highly adaptable, living all over the world and in varied conditions. The mind is also adaptable. It is able to rewire itself via learning, experiences, changes in habit, meditation, psychotherapy. The changes can both be good and bad, but medicine, psychology and psychiatry uses the ability to better the mind. Therapy can help people overcome or counteract effects of strokes and missing limbs. Therapy, conditioning and cognitive therapy will be needed to help the human adapt to adds ons and other technological and medical changes to the body and brain.

Brain plasticity can be taken advantage to get rid of bad habits, gain new ones, etc. Cognitive therapy is one area where people overcome phobias, PTSD, become better thinkers and athletes.

To expand the mind, humans must work at this. Psychotherapy, expanding of the self is essential.

New techniques and ideas will be developed into the future.

[“What is Neuroplasticity?”](#)

[Introduction to Cognitive Behavior Therapy](#)

12.10 QUESTIONS

- If you can invent drugs, devices or other, what would they do to expand the mind?
- How do you think the methods discussed in this article can be used to expand the mind?

13 PHILOSOPHIC NOTES ON CHAPTER 12

The previous chapter showed some of the basic medical and technological areas “to expand the mind and body,” and that lead to a plethora, if not neverending, list of cognitive, theoretical and philosophical questions. This chapter offers assorted philosophical and psychological notes on that chapter, with the following chapter offering more philosophic notes.

13.1 PSYCHIATRIC DRUGS AND TREATMENT

While psychiatric treatment and drugs can be important for treating mental conditions such as bipolar disorder, schizophrenia and epilepsy, they are designed to help the patient to function in society and personal life. This can be important for various reasons, both social and personal. However, as discussed in *Understanding Human Minds and Its Limits*, practical function and truth finding are at odds with each other, and the medicine often works by diminishing parts of the brain.

These medical treatments are intended to create social conformity, and increase practical function, which, while a reasonable choice even to the patient, will inhibit other parts of the brain and thinking. For example, mystical altered states of consciousness sometimes happen during epileptic seizures. Ridding the patient of the seizures will stop those experiences. Similar with schizophrenia. Artists sometimes are wary of taking their medicine for fear it will lessen their aesthetic, creative abilities. Eastern psychology questions if social conformity is a sign of a healthy and developed mind. A Hindu or Buddhist psychologist will note that the enlightened person is often non-conforming and may even appear mentally ill to polite society.

Video: [“How Psychiatric Drugs Really Work - Peter Breggin MD”](#)

However, psychiatric treatment and psychoanalysis are important parts of understanding oneself and expanding the mind. And, in many cases, increasing practical function is an important part of expanding the mind.

After bad reviews for his first symphony, Sergei Rachmaninoff gained a mental block. It took hypnotherapy to gain the confidence to continue composing.

Article: [“How Hypnosis Helped Rachmaninoff Compose His Beloved Piano Concerto No. 2”](#)

13.2 EXPANDING THE SENSES

David Eagleman’s work on expanding human senses has potentially profound effects on the brain and thinking.

Being able to perceive one’s environment using different senses (seeing a wider range of light, having a more dominant sense of hearing, touch or smell) would profoundly change human perception, function, judgment and world view. Our literature, language, communication, even scientific models are imbedded and influenced by our sensory abilities. How we lead our lives is based on our ability to see during daytime. And aesthetics is an integral part of our perception, thinking and judgment. Even our biology-- our psychology, moods, energy-- is influenced by daylight and night, seasons.

Broadening our senses would broaden our view, give us new knowledge and understanding.

However, increasing the amount of sensory information increasing does not mean more a greater amount will be processed by the mind. The brain has a limited capacity as to how much information it can process, and some say it has maximized its limits. This is illustrated in our need to focus on and ignore information to do things. We sometimes literally cover our ears or turn down the radio volume in order to concentrate on text or



do a math problem. Some scientists believe humans have reached their capacity to process sensory information.

The brain's capacity will have to be changed, or there will have to be integration of artificial intelligence or other technology, to process the more information.

13.3 VIRTUAL REALITY AND THE QUESTION OF WHAT IS REALITY

The human brain is hermetically encased in the head and processes the information that is given it from the outside world. As it normally receives limited sensory information, and processes it in limited and often delusory ways, it could be said that our normal experience is virtual reality. It is not reality, but a limited and often delusory translation of it.

Through the use of having different experiences, receiving different sensory information, virtual reality be considered just as real, or no less unreal, than our normal experiences.

In fact, if virtual reality gives us new and broader views, takes us out of our rut, involves wider sensory information, some might say it has the potential to be more real. Many would say giving a human different experiences of other places, ways of thinking, give the human a more realistic view of the universe, and expanding the mind.

The problem lies in that it is impossible to say what really is reality, and humans can never answer what is or know they are having an experience of reality.

13.4 THE COGNITIVE ISSUES WITH PROCESSING NEW SENSORY INFORMATION

Giving people new sensory information itself isn't enough. Beyond brain capacity, people don't automatically have the cognitive ability to process it. When someone is given a hearing aid, it takes a while for it to work, for the brain to process the information. When someone is given a new limb, it take both physical and mental theory to use it properly. In some cases, they can never be cognitively used effectively.

Read the below articles about the man who gained weight as an adult, and how seeing is more than just receiving the sensory information.

Article: [Treating Blindness Takes More Than Meets The Eye](#)

Article: [Stanford scientists link brain development to chances of recovering vision after blindness](#)

This is why many say implants may best given when the human in a child, or infant, and not an adult. This, of course, brings up ethical issues.

Also note that the person described in the previous articles was successful while blind. One makes up for limits to certain aspects by making up for in another.

13.5 NEW BODY FUNCTIONS AND IMPLANTS

Better, or at least different, body function will change perception and mental function. Just as the mind develops based on tradition; physical function, new functions and abilities will alter the mind. New limbs and sensory abilities, changes to physical and mental speed, dexterity, touch, faster and broader travel, will change our minds. It has long been known that the mind develops to changes to the body and abilities.

It is likely that some new physical abilities will expand the mind, while others will just allow us to think and perceive in different ways. Whether having more limbs or senses will allow us to think better, worse or just differently is a matter for debate, often on a case by case basis.

13.6 IT'S NOT JUST NEW TECHNOLOGY BUT WHAT YOU DO WITH IT

It is more than just than new technology and its potentially amazing abilities, but the organization and proper use of it. A technology is only as good as its use. Humans have great access to information via the internet, but many use it to waste time, play games, watch useless videos. In fact, many say a problem is humans use it too much, and people should turn off their technology to experience the natural world and real social experiences.

Article: [Does the Internet Make You Dumber? \(Wall Street Journal\)](#)

Article: [Is the Internet killing our brains? \(The Guardian\)](#)

13.7 EUGENICS

Eugenics is a complex area, with many interesting and problematic issues.

One big area is ethics, a touchy subject ever since the Nazis envisioned using it for racial engineering. While eugenics will move forward in the future as it can help the health of the baby, mother and society, many will choose to hinder eugenics for ethical, moral and religious reasons.

Many eugenic choices are myopic and fashionable. This includes choosing a sperm or egg donor based on hair color, height and other physical aspects. Even when trying to produce the 'smarter baby,' people will pick donors based on their SAT scores, education and jobs, which is narrow way of defining intelligence.

Diversity in a population is important. Many great human things-- art, science, philosophy-- have been produced by unexpected people, people who fell outside of social norms. If people choose aspects based on fads or standardized tests or the latest magazine article or to fit in with society or at school, this may reduce important diversity.

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Further, bad times and bad situations can produce good minds, good things. Having a baby with no conditions and being perfectly beautiful and socially ideal may be detrimental to the growth of both the person and society. Bad times, crucibles, are often where people learn and expand. Angst produces great art, problems lead to great inventions.

What limits or conditions would you put on eugenics? Do you worry about unintended consequences? What personal moral and/or issues do you have with eugenics?

13.8 NEW METHODS OF COMMUNICATION

Better communication would be revolutionary. Virtual reality, automatic language translation, direct mind-to-mind communication, the use of artificial intelligence to expand and speed up and make more precise language, would be revolutionary and profound.

Philosophers, theologians and other thinkers have long discussed how human language, human symbolic language, is limited. It is a limited, artificial and distorted translation of larger ideas, and the symbols are interpreted differently from person to person. When we speak to someone we don't really know how the person interprets the words. Any improving of language and communication would be radical and mind expanding.

13.9 THE FUTURE IS UNKNOWN

As discussed in the book *Philosophy of Artificial Intelligence*, it is impossible to know how things will work out. Some technologies and treatments will work, while others will not. There will be unintended consequences and surprises.

The future of medicine, technology, humans and human society is determined by forces such as politics, social movements, popular sentiment and what works versus what doesn't. The real world is much more than science fiction fantasizing.

How will things be in the future? Different than you predict.

13.10 TECHNOLOGY ALLOWS US TO DO MORE IN THE SAME LENGTH OF TIME

Artificial intelligence will do many things and make life quicker and speedier for humans. Even if we cannot lengthen the human lifespan we can increase what can be done in that time.

Technology brings speed and makes the world smaller, which can expand the mind. Technology do things faster-- travel faster, do advanced calculations faster, travel faster. We can communicate better around the world, go to places than our ancestors could.

Article: [Notes on the philosophy of time](#)

14 FURTHER AND FINAL PHILOSOPHIC NOTES

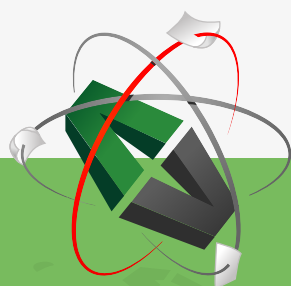
14.1 INDIVIDUALITY

Never forget the individuality of humans. The different temperaments, personalities, sensory abilities and disabilities. There is no one size fits all method to expand the mind, learn, or what is the best way to expand the mind. What may work for you, won't necessarily work for another.

'There are hundreds of paths up the mountain, all leading to the same place. The only person wasting time is the one running around the mountain telling others that their paths are wrong.'

– Hindu Proverb

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14.2 EXPANSION OF AN ARTIFICIAL CONSTRUCT

As discussed, the human's normal right-brain conception of reality is arbitrary, limited, delusory and shallow. Much scientific and other research and study (history, sociology, economics, geography) is working to just expand in this arbitrary and artificial area of conception. Much of science is just expanding this method of thinking. Making more precise categories and labels of animals, plants or rocks is just making more precise arbitrary categories, labels and way of thinking. These categories and labels may have practical use, but they are still myopic and arbitrary.

This is why philosophy, mysticism and other viewpoints essential. Giving other points of view, perspectives and keeping things in check are essential. Science, history, other traditional studies are often working on basic assumptions that are, at the least, problematic and limited.

14.3 THE BRAIN'S LEFT HEMISPHERE

There is no question that expanding the left brain, Gestalt, visionary, creative, intuitive thinking are important. It is possible, if not likely, that many of the scientific, medical and technological methods will expand our minds in more visionary ways: virtual reality, genetic editing, new education methods, new perspectives. Learning new scientific facts, new history can, in and of itself, expand the mind, change one's perspective.

14.4 DIFFERENT AND OTHER WAYS OF PROCESSING INFORMATION AND THINKING

As discussed in the chapters on mysticism and Eastern versus Western psychology, there is always an inherent conflict between the two sides of the mind, the proverbial and sometimes literal right hemisphere and left hemisphere ways of thinking. And in normal circumstance, expansion or use of one requires the limits or suspension of the other. Both ways of thinking and perceiving are important and should be used, but they conflict and are often like oil and water.

Further, they are just different and differently limited and arbitrary ways of processing limited sensory information. Neither is known to be the 'correct' way. And the two don't combine to make a whole understanding.

We don't know what way, including beyond the human ways, is the correct way to process and interpret information. We can just know that our ways are limited, incomplete and problematic.

Considering the mystical and scientific ways of processing of information are each arbitrary, limited and delusory, and there are countless other ways to process the information, can you come up with a different way of thinking?

14.5 MOVING BEYOND CURRENT HUMAN FUNCTIONS AND QUALITIES

Full expansion of the human mind would require moving beyond normal human biology, psychology, ethics and morals.

Much human thinking and functioning is biologically and psychologically innate, based on self preservation and evolutionary function. The changing of the human biological needs-- procreation, food, sleep, sensory requirements-- can radically change the need for traditional human ethics and morality, and this can lead to the expansion of the mind. In fact, moving beyond human-centrism and the human ego are essential. Changing human biology, incorporating artificial intelligence and non-human animal thinking are needed.

Full expansion of the mind, such as through artificial intelligence or creation of another species, may leave behind humans. AI wouldn't have the same biological and psychological needs as humans-- and the same with altered humans. AI doesn't have biological needs. It doesn't need food or sleep or love or sex, nor human psychological needs, and doesn't need to function with those as consideration.

Further expansion may require moving away from humans, ceding human power, say to AI, changing humans to non-humans. The highest mind may not involve humans.

Many humans are uncomfortable with this, many are against this this, which says there are considerations of other than the the attainment of full knowledge, full expansion of mind.

This points to that expansion of the human or other mind is not the only thing to consider. Most everyone would say that expansion of the human mind must be tempered by other considerations such as ethics, happiness, physical healthy, practical function, the welfare of others.

14.6 CHANGING SOCIETY

Society change is important to expand minds. This includes new education systems, social interplay, changing of work and education dynamics. Certainly, if AI is introduced as a vital partner with humans, machine-human social dynamics changes will be essential.

As humans are social animals, and the brain develops via social interactions, changes to individual and group social dynamics will change the mind. Developing social intelligence is an important part of expanding the mind.

14.7 DO YOU THINK OF EXPANSION OF THE INDIVIDUAL OR GROUP MIND?

Is the goal of mind expansion group mind expansion or individual mind expansion? They will require different methods. A group mind may have the individuals specialize and thus not expand their individual minds to the fullest. For example a human trying to expand its mind to the fullest may choose to hone its mathematical and computational skills. However, with a group human-technology mind, a computer would better do the math and other aspects, with the human focusing on other tasks. A group mind, say of many humans or many humans with AI and/or other technology, would be broader and more expansive than an individual human mind, with the human acting as a specialized cog. Humans have already ceded skills to computers and artificial intelligence. We have computers do complex, and even simple, calculations.

14.8 MAKING PRACTICAL CHOICES FOR LIFE ON EARTH

Most knowledge and understanding will always be beyond humans, yet one must still make practical decisions. This includes practical rules about morality, ethics, laws, how to organize and run communities and society. Often times, people of diverse religious beliefs favor many of the same social rules: education and road systems, democracy, daily ethics.

The chapter on organized religion was about the problems and impossibilities in trying to incorporate theory and the esoteric into social and organizational structure.

14.9 BE CONSCIOUS OF YOUR MIND'S LIMITS

"Real knowledge is to know the extent of one's ignorance."

– Confucius

While expanding one's knowledge is important, knowing the limits of one's knowledge is also essential knowledge.

It is essential to realize that we don't know everything, cannot know everything, and knowledge is an eternal, unfulfilled search. Being aware of one's limits, that one has inescapable and unknown biases, is essential.

As the below quote by the Physics Nobel Prize winner Richard Feynman says, falsely-pretending or thinking you know it all means you have ended the search for knowledge and true understanding. Knowing one has so much more to learn fuels the journey, and, most important, is true.

"I can live with doubt and uncertainty and not knowing. I think it is much more interesting to live not knowing than to have answers that might be wrong. If we will only allow that, as we progress, we remain unsure, we will leave opportunities for alternatives. We will not become enthusiastic for the fact, the knowledge, the absolute truth of the day, but remain always uncertain ... In order to make progress, one must leave the door to the unknown ajar."

– Richard Feynman ([video: "The Uncertainty Of Knowledge"](#))

It is fine and even necessary to use faith, arbitrary and subjective rules to function and learn-- and they are necessary--, but do not construe them as truths, objective and absolute.

14.10 THERE IS NO ONE OR OBJECTIVE 'CORRECT' WAY TO EXPAND THE MIND

There is no way to know the best way to expand the mind. The way one chooses is a matter of choice, even personal taste and sentiment. Is function more important than knowledge? Is expanding the left brain more important than expanding the right brain? What considerations other than expansion of the mind should be made? Are there things more important than expansion of the mind? Can expanding the mind even be defined? Is there really such a thing? There are no objective answers.

This book is thus ended the same way it began, with the following quotes:

"What we know is a drop. What we don't know is an ocean."

– Isaac Newton


"There are no answers. Only choices."

– Solaris (2002)

14.11 QUESTIONS

- How would you expand the mind? Why? Do you envision expansion as involving your mind, a group mind, society in general? What methods would you use?
- What things other than expansion of the mind are important to you? Happiness? Ethics?
- Are there things more important than expanding the mind?



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