What Mystical Experiences Tell Us About Human Knowledge by David Cycleback Ph.D.

(peer-reviewed by Dr. Catorina Amorim, University of Oxford, and Rev. Dr. Bud James, All-Faiths Seminary)

"We can only know the world as it appears from our perspective"-- science journalist Dan Falk (Falk 2019)

From religion to philosophy to science, all human systems of definition are formed by human brains. The nature and limits of the human brain are the nature and limits of those systems. This essay shows how the human brain works normally then unusually, and what this reveals about the limits of human knowledge.

There are many conditions and instances where the brain processes information unusually, including mental disorders, physical events, and drug use. This essay focuses on the neurological events called **mystical experiences**.

The human brain is a sensory information processor

To function and survive as a species, humans have evolved to use various mental methods to process the limited sensory information they receive.

There are many different ways for brains to process information. Human brains and bodies have evolved to use a particular and limited way suitable for their particular purposes, needs and environment. For different purposes and needs, non-human animals and artificial minds process information differently. There is a diversity of brain functioning even within the parameters of what is considered "normal," and that likely no two human brains function exactly alike. Each way of information processing has its positives and negatives, special skills and problems. Computers and non-human animals are superior to humans at some tasks, humans at other tasks. It is not a matter of which brain is better or worse. They are just different. (University of Adelaide 2013) (Lubin 2017) (Dickson 2018)

That humans cannot know which, if any, way or combination of ways of thinking is the 'best' or 'correct' for examining the world and reality is one of the key limits to human knowledge. Visual illusions and cognitive biases demonstrate the margins of error in normal human perception.



Despite the appearance, the above 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. For those who have never before seen this image and do not know it is a visual illusion, the rational answer would be the bar changes in tone. To say it is solid in tone would be irrational and defy what your eyes tell you. It is not that all false perceptions of reality are due to faulty logic, but that many are formed using what is considered sound logic and reasoning.

The emotional versus the intellectual

The human has evolved to simultaneously use two both complementary and competing ways of processing. I'll call one way of thinking "the emotional" and the other "the intellectual." (Roger Sperry History 2017) (Jarrett 2012)

All humans exhibit these two ways of thinking and you notice them in yourself: the emotional versus the objective, the artistic versus the logical, the head versus the heart. Deep thinkers come to the point where they realize they cannot answer important questions because these two ways of thinking give them different and sometimes mutually exclusive answers. That right there shows knowledge limits of humans.

These different and competing ways of thinking are happening at the neurological levels of your brain.

Parts of the brain process and interpret sensory information in an emotional, holistic way. Emotions are integral parts of human thinking and function. They are integral parts of human intelligence and reason, including as used by scientists and mathematicians. Further, much important human thinking– such as about metaphysical and emotional meaning, morality and ethics, how to live one's life– in part lay beyond objectivity and logic. (Okon-Singer 2015) (Pessoa 2018)

Separately and simultaneously, other parts of the brain "intellectually" process and define information. The raw sensory information has to be given some structure and definition to try to understand what to do with it. To do this the brain creates an imagined structure to the information. The standard automatic human perceptions of physical geography, categories, identities and time are artificial constructs of the mind. Symbolic language is practically useful, but an artificial translation of the things it is trying to represent. Humans must translate things in order to understand them, but what they understand is the translation.

Combining in a particular way these two particular methods of information processing, humans are adept at basic functioning. Yes, there is a margin of error and sometimes big mistakes are made, However, on the whole, humans are adept at doing such things as judging distance and size, identifying objects in our daily lives, walking through a room without hitting a table or wall.

However, when one gets into realms of philosophy, theology and even science, the natural misperceptions, blind spots and biases take on profound significance, making it impossible for humans to have objective knowledge.

Human thinking is about function

Humans have evolved for survival, not finding truths and objective facts. To survive and function, the human must do other things such as act and guess in ambiguous and mysterious situations. Many of these things are not about identifying facts and searching for truths, but making speedy practical decisions. In fact, humans are hard-wired to make decisions in the face of lack of knowledge.

An example is avoiding instant danger, which is about how to react to the unknown and unknowable. If a threatening large shape is moving quickly at you, taking the time to accurately identify the shape ('gathering the facts') is the opposite of what you need to do. Get out of the way right away, then you can worry about identification later. This is the unconscious self-preservation instinct of humans. This is just one example of how truth-finding is not always the priority of the mind and, in fact, can inhibit function. Survival is commonly said to be about erring on the side of safety– as it takes only one time being hit by a speeding car or falling off a cliff to be dead– and the keyword there being 'erring.' In this case, the mind is designed to err.

The human mind has limited capacity and human function can be inhibited by too much information and even truths. To function, the mind must suppress information. If your task is to move across a room, trying to identify and learn the history and "truth" of everything in the room would lead to you dying of old age before you reach the other side. The human has the conscious and unconscious ability to focus, which means it ignores some information and blocks out other

information. The human never gets or is able to get the full picture even of what is physically visible right in front of it. (McGovern Institute 2019)



The above '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 perception was wrong. Unlike some visual illusions where part of the image is blocked and left to the viewer's imagination, there is no missing information here. All of the information is there for the viewer to see, but the viewer forms the initial perception as if information is hidden. She mentally hides, or ignores, the information herself. Part of the explanation is that the human brain doesn't have the capacity to cognitively process the sensory information it receives all at once, and so focuses and ignores.

Even more than ignoring information, humans must use arbitrary rules, false beliefs and self-deception to functionally achieve. There are regular cases where positive achievement is achieved from a false belief. These include in your daily life. Believing the false, if only temporarily, is a technique we all use to remove distracting thoughts. The following are two examples.

* Though a placebo sometimes helps when the patient knows it's a placebo, a placebo often helps because the patient falsely believes it is medicine. When this patient knows what it is, the same placebo may not help.

* A student at university, Jessica is entering her final exam week before winter break. Unknown to her, the beloved family 14-year-old cat Tiger just died back home. Her parents don't inform her that the cat has died until after the exam, as they believe knowledge will interfere with her test-taking. After a productive week, her parents break the bad news to Jessica. Jessica understands the delay, agreeing that the news would have distracted her from her studies. In both these cases, it was a false belief that led to the desired achievement. In both cases, knowledge would have hindered function.

Whether or not human functional thinking can produce "truth" and "objective knowledge" as a side effect cannot be known, though I am doubtful. At the least, it cannot be known, and this places a limit on human knowledge.

Mystical experiences

While the two ways of information processing normally work together, there are instances when the cognitive structures of symbolic language, categorization and perceptions of time and geography are suppressed. With these processes suppressed, humans perceive and process sensory information with the emotional parts of the brain.

A case of this is commonly called the "mystical experience." (Dimitropoulos 2017)

To people who have had these mystical experiences, they can be profound, sometimes the most emotionally profound and seemingly real experiences they've ever had. They perceive and seem to understand their world in a new and more vivid way. They often feel they gain profound intuitive knowledge about reality. (Watts 2015) (Dimitropoulos 2017)

University of Pennsylvania medicine professor Andrew Newberg MD says people who experience mystical experiences say the experiences are more real than their ordinary experience. (Blumberg 2014)

"(Mystical experiences are) the only description that I've ever seen where somebody will say 'I got beyond my brain, I got beyond my ego self, I got beyond the subjective and objective nature of the world;' and then they see the universe, and they experience the universe in a very, very different kind of way . . . I think these experiences need to be taken very seriously. I think they tell us something about the nature of reality and how we perceive that reality."-- Andrew Newberg (Newberg in Blumberg 2014)

During the experiences, the sense of time slows or stops, normal daily categories and labels fall away. The experiencers often feel as if they have become one with everything else. Additionally, there is often a rush of dopamine that makes the person feel bliss. Thus, people often not only get a different rush of sensory information but an associated sense of beauty, happiness and love. Notice how religions and the spiritual often refer to the universe as one and promote the idea of universal love. (Shader 2008)

Mystical experiences happen in different situations. They can happen in religious ceremonies such as Whirling dervish dances of the Sufi Muslims, Cree Sun Dances, Hindi Yoga and Catholic prayer. They often happen during deep meditation, and meditation is an integral part of religious ceremonies. (Britannica 2015)

As many people perceive mystical experiences as an experience of transcendental or higher reality, they have been the genesis of all religions. Mystical religions and religious subdivisions, including Buddhism, Hinduism, Mystical Christianity, Jewish Kabbalah, Muslim Sufism, many American Indian and other aboriginal religions are trying to gain and sustain the mystical way of thinking. That's what all those religious ceremonies are about. Jesus, Moses, Muhammad and Buddha and other prophets had mystical experiences.

While they are commonly associated with religions, atheists and agnostics experience them as well. The religious interpretation is one interpretation by some. The atheists Bertrand Russell and Richard Dawkins experienced them. After hearing someone describe their religiously significant mystical experience, Dawkins said he had had a remarkably similar experience but without the religion. (Russell 1914) (Steinhart 2012)

The events can happen spontaneously to the secular, when in nature or doing secular tasks. Mathematicians can have it happen when doing math, and it can happen during fasting, sports, secular meditation. They can happen when experiencing or creating art. The runners high or athletes seeing everything in slow motion are considered examples. (Taylor 2012)

Primatologist Jane Goodall said, "I don't have any idea of who or what God is. But I do believe in some great spiritual power. I feel it particularly when I'm out in nature. It's just something that's bigger and stronger than what I am or what anybody is. I feel it. And it's enough for me." (Goodall in Goodreads 2015)

Certain drugs can produce 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. They can happen during some mental conditions including epileptic seizures, schizophrenia and bipolar mania and depression. (Pahnke 1966) (Vanderpot 2017) (Parnas & Henriksen 2016) (Dillard-Wright 2017)

Mystical experiences are experiential and a-rational

Mystical experiences are only experiential. By definition and neurology, they are beyond symbolic words, logic and rational explanation. Those cognitive constructs have to be suppressed for mystical experiences to happen. Philosopher and psychologist William James said that the experiences are beyond words. They cannot be fully explained or communicated to others, just experienced. (James 1902)

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

Columbia University philosophy of religion professor Wayne Proudfoot writes that mystical experiences are explained in a religious framework, and that the framework is unconscious

(Proudfoot 1985). A Christian may say she saw the Christian God, a Muslim Allah, and an atheist a secular vision. Princeton University philosopher Walter Terence Stace writes that mysticism is perception not interpretation, and that only after the mystical experience is the interpretation made (Stace 1960).

With his theory of Pluralism, philosopher of religion 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. (Cramer 2015)

"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 (UK), 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 Ph.D., Department of Religious Studies, Baylor University (Cramer 2015)

No one can be certain what mystical experiences mean

While there is no debate that they involve genuine neurological experiences, there has been a never-ending and ultimately unanswerable debate over what are the mystical experiences and what if any spiritual or epistemological meaning they have. Humans can't have the final or objective answer.

Some believe they are proof of God. They say God isn't something you scientifically measure or intellectualize, but something you feel and know through this feeling. Atheists often scoff at people who say that God exists due to their personal emotional experience. However, we all have strong intuitive beliefs, beliefs that guide us and give emotional meaning to our lives and that we teach to our children, but that cannot be "proven." (Christian Standard Bible 2017) (Craig 2017)

Skeptics believe the mystical experiences are strictly in the mind. Skeptics often have a rational point of view of the world and accept the normal human perception of the world as accurate. They often use science as an arbiter, and don't buy anything that hasn't been, or can't be, proven by science. (Jaekl 2018)

I believe that mystical experiences give important if subjective insights and perspectives on the world but their veracity and ultimate meaning cannot be known. The insights are beyond logic

and scientific testing. They may be less formed by the normal artificial cognitive constructs of the mind, but they are still formed by the limits of human senses and evolutionary biology. In the beginning and in the end, they are subjective personal experiences. Trying to intellectually interpret them is at odds with what they are. It is fine to have an opinion about what is this experience. However, realize that it is just that, an opinion.

Mystical experiences point out the artificial cognitive constructs of the human brain

While it is impossible to know what are mystical experiences, one key is they show us that our normal perceptions of time, space, identifies, categories and order are artificial constructs of the mind. Our symbolic language identification, categorization and translation is artificial and arbitrary. To see them as direct representations of reality is false

Another key to realize is that much scientific and other work (history books, sociology, economics, geography, encyclopedias, dictionaries, literature) are working to expand in this arbitrary and artificial area of conception and constructs. These cognitive representations have practical use, but are still artificial and miss much of reality and nature.

An example is that scientists, and many other academics and philosophers, use time as a standard and precise measurement. Yet, if you ask scientists and philosophers, they will tell you they don't know what really is time, if it objectively exists, and, if it does objectively exist, if the conception and definition they use has any resemblance to what it really is. Most scientists would say that the definitions they use of time are artificial and arbitrary. (McTaggart 1908) (Jaffe 2018) (Razumovsky 1993)

The way humans commonly perceive time is a product of the brain, and when the particular parts of the brain are suppressed, such as during religious experiences, medical disorder or drug use, a human perceives time very differently.

References:

Blumberg L (2014), "What Happens to the Brain During Spiritual Experiences?", theatlantic.com/health/archive/2014/06/what-happens-to-brains-during-spiritual-experiences/361 882/

Britannica (2015), "Techniques for inducing mystical experiences", britannica.com/topic/mysticism/Techniques-for-inducing-mystical-experiences

Christian Standard Bible (2017), "Can a Religious Experience Show that There Is a God?", csbible.com/religious-experience-show-god/

Craig W L (2009), "Can We Trust Religious Experiences?", youtube.com/watch?v=AYc4hmrHthg

Cramer D (2015), 'John Hick,' iep.utm.edu/hick/

Dickson B (2018), 'There's a huge difference between AI and human intelligence—so let's stop comparing them' bdtechtalks.com/2018/08/21/artificial-intelligence-vs-human-mind-brain/

Dillard-Wright D (2017), "Thoughts on Grof, Epilepsy, and Mysticism What do epilepsy, mental illness, and religious experience have in common?",

psychologytoday.com/us/blog/boundless/201702/thoughts-grof-epilepsy-and-mysticism

Dimitropoulos S (2017) 'How Does Neuroscience Explain Spiritual and Religious Experiences?', medium.com/s/spirits-in-your-brain/how-does-neuroscience-explain-spiritual-and-religious-expe riences-3ef8c2f50339

James W (1902), "The Varieties of Religious Experiences: a Study in Human Nature", Longmans, Green, 1902.

Jarrett C (2012), "Why the Left-Brain Right-Brain Myth Will Probably Never Die", psychologytoday.com/us/blog/brain-myths/201206/why-the-left-brain-right-brain-myth-will-pro bably-never-die

Falk D (2019) 'Cosmos, Quantum and Consciousness,' scientificamerican.com/article/cosmos-quantum-and-consciousness-is-science-doomed-to-leave-some-questions-unanswered/

Jaekl P (2018), "Turns out near-death experiences are psychedelic, not religious", wired.co.uk/article/near-death-experiences-psychedelic-religious

Jaffe A (2018), "The illusion of time", nature.com/articles/d41586-018-04558-7

Lubin G (2017), Animals Are Way Smarter Than We Give Them Credit For, https://www.sciencealert.com/animals-are-much-smarter-than-people-realize-scientist-says

McGovern Institute (2019), "How does the brain focus?",

mcgovern.mit.edu/2019/03/14/ask-the-brain-how-does-the-brain-focus/

McTaggart J (1908), "The Unreality of Time", dif.unige.it/epilog/McTaggart.pdf

Okon-Singer H, Hendler T, Pessoa L, Shackman A (2016), ("The neurobiology of emotion–cognition interactions: fundamental questions and strategies for future research", frontiersin.org/articles/10.3389/fnhum.2015.00058/

Pessoa L (2018), "Cognition and emotion", scholarpedia.org/article/Cognition_and_emotion

Proudfoot. Berkeley W (1985), "Religious Experiences" University of California Press, 1985

Pahnke W (1966), "Drugs and Mysticism", psychedelic-library.org/pahnke.htm

Parnas J & Henriksen M (2016), "Mysticism and schizophrenia: A phenomenological exploration of the structure of consciousness in the schizophrenia spectrum disorders", sciencedirect.com/science/article/pii/S1053810016301088

Razumovsky O (1993), "Models of Time in Physics and Cosmology", chronos.msu.ru/old/EREPORTS/razumovsky_models.htm

Roger Sperry History (2016) "Gazzaniga explains Split Brain in Sperry Lab", youtube.com/watch?v=8cOBt5fxS3Y

Russell B (1914), "Mysticism and Logic", drew.edu/~jlenz/br-ml-ch1.html

Shader D (2008), "Seven Characteristics of Mystical Experiences",

citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.601.4094&rep=rep1&type=pdf#:~:text=Abs tract%3A%20Drawing%20on%20classic%20studies,that%20mystical%20experiences%20reveal %20an

Stace W (1960), "Mysticism and Philosophy",

academia.edu/30670193/Walter_Terence_Stace_Mysticism_and_Philosophy_1960_pdf

Steinhart E (2020), "The Surprising Spirituality of Richard Dawkins", snsociety.org/the-surprising-spirituality-of-richard-dawkins/

Taylor S (2012), "Spirituality: The Hidden Side of Sports" ru.org/index.php/sport/30-spirituality-the-hidden-side-of-sports

University of Adelaide (2013), "Humans not smarter than animals, just different, experts say", https://phys.org/news/2013-12-humans-smarter-animals-experts.html

Vanderpot L (2017), "Spiritual Side Effects of Psychiatric Medication: From Helpful to Harmful",

madinamerica.com/2017/08/spiritual-side-effects-of-psychiatric-medication-from-helpful-to-har mful/

Watts A (2014), "The mystical experience", youtube.com/watch?v=HwYeTUYL2m4