

What is human consciousness?

Human consciousness is an illusion - a manifestation of the dual-purpose stimulus sorter which plays the central role in each human brain.

It is fair to call our consciousness an illusion because it clearly does not work as one imagines. Some aspects of our sense of sight are instructive. For example we believe we see the world seamlessly and right-side up. However the lens of the eyes project images on the retinas reversed left for right and inverted top for bottom. The information is transmitted along the optic nerves without being righted. The optic nerves join behind the eyes and split - with nerves from the right side of the retinas mapping upside down on the right visual cortex of the brain and the nerves from the left side of the retinas mapping upside down on the left visual cortex. That means the right visual cortex receives upside down information about the left side of the field of view while the left visual cortex receives upside down information about the right side of the field of view. The obvious conclusion is that the thing we perceive as consciousness is upside-down and backwards in our brains - yet we are completely oblivious to that fact.

Binocular vision provides information beyond what a single eye could produce. The primary bit of extra information provided by binocular vision is a sense of depth - that is the ability to discern how far away some objects are when compared to other objects. We are generally not aware of the tremendous amount of depth information available - until something causes anomalous information to be presented.

One way to experience anomalous depth information is to view a stereogram such as popularized in the "Magic Eye" poster and books. The thing we perceive as consciousness is obviously constantly receiving and processing all that depth information - without us even being aware of how the information is perceived. We only become aware of the depth "channel" when something creates anomalous depth information.

Visual information received via the optic nerve is just one type of information being fed into the stimulus sorter which we perceive as our consciousness. There are stimuli arriving via the auditory nerves. But the stimulus sorter does not get the raw data. Like visual stimuli, the information about sounds in our environment isn't exactly what it seems.

When a computer is programmed for speech recognition one of the first steps is typically a "Fourier Transform". This is a complex mathematical function used to break the complex sound into its constituent parts. The computer then deals with speech as a stream of various frequencies with measureable durations.

The remarkable ear never combines all the frequencies into a composite signal in the way a microphone does for a computer. The auditory channel to the brain is similar to the visual channel in that it is passing tremendous quantities of information in parallel. In order to “hear” a violin a computer would perform a Fourier Transform and analyze all the constituent frequencies. A human brain does almost the opposite - it receives information about all the frequencies in parallel and then presents the consciousness with “violin” or “someone talking”. The arrival times of signals from the ears are even compared to derive some directional information which is passed along seamlessly with other information about sounds in our environment.

Many people erroneously assign the concept of a “soul” in place of the “consciousness” program running on our bio-computers. The fallacy of this should be immediately obvious but people have traditionally ignored the evidence. Consequently, while discussing the nature of the thing which we experience as consciousness, we should also discuss what it is not. The thing which we experience as consciousness is not a manifestation of a “soul” or “spirit.” There is no credible or reproducible evidence of a “soul” or “spirit” which can exist independently of the brain. All evidence instead supports the conclusion that the thing we experience as consciousness is a manifestation of the biochemical computer which we call the brain. To presume that the wonderful illusion of consciousness continues after the brain dies is no more reasonable than to presume the operating system of one’s iPod continues once the battery has been removed and the whole thing has been sent to the recycling center (or has begun to corrode after being buried in a landfill if one is the less responsible sort). For example, people with advancing Alzheimer’s disease often exhibit dramatic changes in behavior. Women who formerly personified civility and decorum often begin to use foul language as the higher brain functions fail and baser motivations are left unrestrained. Men with advancing Alzheimer’s disease are particularly prone to act on baser instincts such as engaging in sexual harassment when they were formerly well-behaved “gentlemen.” These changes are inconsistent with the idea that an inherently “good” or “evil” spirit/soul is the repository or vehicle for such characteristics. Similar evidence is easily observed in people who have had strokes or other brain trauma. The degree of damage to the “soul” or “spirit” is generally proportional to the degree of damage to the brain. The bio-computer of the brain is very fragile when compared to the silicon-based technology of an iPod. One may reasonably anticipate that an iPod will function normally after being deprived of electricity for weeks or months - one need only connect the charger cord and push the power button. In contrast a brain deprived of its flow of oxygenated blood begins to show signs of irreversible decay within a matter of minutes. The wonderful illusion of consciousness may be adversely affected after an interruption of oxygenated blood - or if the interruption was too long then the illusion may not “reboot” at all.

There is another problem with the notion of a severable “soul” or “spirit.” No characteristic or structure of the human brain has been identified which distinguishes it from other mammalian brains as far as connecting to any conjectural external supernatural instantiations. Without such distinguishing characteristics where are we to presume the “giver of souls” draws the line? Do humans with malformed brains still get assigned a “soul”? Do kitty cats and “man’s best friend” get assigned “souls” or “spirits”? What about the chimpanzees which share 98% of our DNA? Do chimpanzees get 98% of a “soul” or “spirit”? There is no rational basis for an answer to these questions. The only rational approach is to employ “Occam’s razor” which says one must not multiply entities without necessity. In this case that means one should not conjure up supernatural processes and add them to the obvious and observable reality of the biochemical computer. A “soul” or “spirit” is not a necessity when explaining the illusion which we experience as consciousness.

Consider a hypothetical situation involving a computer transported through time to an early electronics laboratory. In this laboratory there would be people skilled in using the instruments of the day. After a while they would surely deduce that electricity was ultimately responsible for the things displayed on the strange glowing screen. But what supernatural entities would the people in the laboratory imagine in order to explain light without heat or apparent motion with absolute silence? The people in the laboratory might even determine that the most interesting parts of the computer were constantly swapping little electrical impulses. But would they be able to reverse engineer the encoded pulses to figure out the intricate interplay of pulses to understand data and programs? Or would they of imagined necessity conjure up some magical or supernatural processes to explain the things observed on the computer screen? This is analogous to our understanding of the illusion of consciousness. Will most of us still cling to the notion of a “soul” or “spirit” even after being shown a “printout” of the “consciousness” program “reverse engineered” from chemical bonds somewhere in the brain?

The stimulus sorter or “consciousness” program has a great many inputs. For example there is a section of the brain dedicated to the sense of touch. There is a section for each side of the body - interestingly enough on the opposite side of the brain compared to the actual body. These map the body with the feet being uppermost near the top center of the cerebral cortex. The map extends away from the centerline and downward with areas for the head and tongue at the bottom. This whole mapping of the body is referred to as the cortical homunculus. This is a second piece of evidence that the stimulus sorter or “consciousness” is situated upside-down in the brain - without having the slightest awareness of that fact. There is another interesting characteristic of the cortical homunculus. When it was mapped by Wilder Penfield he found that it was not proportioned to match the physical body. The size of the areas

dedicated to the fingers and tongue are very large compared to the actual size of these body parts.

Reproductive urges are also stimuli - all being sorted and prioritized just like in the cat's brain.

There are some stimuli which are found in the human brain but not in the cat's brain or are expressed to a much lesser degree in the cat's brain. These are thoughts that originate within the stimulus sorter and are immediately processed as additional stimuli. *My mother made me. Her mother made her. Was there a first mother? What made her?*

In her book *The Meme Machine*, Susan Blackmore posed an interesting question as to why the voices never seem to stop. The short answer is because it is beneficial to religion that the stimulus sorter be fully utilized at all times. However, there are more building blocks required before one may most accurately understand the complete answer. So at this point we will just say that on average, the more active the stimulus sorter is, the more it benefits religion. For now just consider that a more active or self-stimulating stimulus sorter is more likely to process stimuli like "Where does the sun god go at night?" and "Is there a higher purpose?" than is a less active stimulus sorter. Later we will consider the mechanisms that work with religion and the stimulus sorter to form a regenerative feedback loop which affects the blueprints for the stimulus sorter.