

Our Well-Being is a Result of Effective Communication of Messages Sent and Received

Chapter 9: (HEAD/Pathways): Offered by Ron Lively, M.Div., M.A. – BiblicalMentoring.org / Studies

Resource: In His Image by Dr. Paul Brand & Philip Yancey. Zondervan Publishing House, Grand Rapids, MI. (1984). *In his two companion books, Fearfully and Wonderfully Made and In His Image, Dr. Brand with the help of Philip Yancey, places an emphasis on the individual human cells in our body and their varying roles within the body for the sake of the body as a whole. He then points to the Body of Christ (the Church) and makes insightful analogies about the connections and forces that unite and guide our human bodies (and the Body of Christ). The suggested process is to review the questions prior to reviewing the content. If time is limited, each person in a group discussion should read the content prior to spending time in a group discussion to answer the questions.*

Key Verse: Isaiah 44:24 - Thus says the LORD, your Redeemer, who formed you from the womb: “I am the LORD, who made all things, who alone stretched out the heavens, who spread out the earth by myself,

Questions for Personal Applications or Group Discussions:

1. How are our five senses important for our total well-being.? Think of someone who has sight or hearing or speech impairment. How do they achieve well-being? Is that possible even with a lot of challenges?
2. Dr. Brand says that there are five trillion chemical operations occurring in our brain every second! Even on a lazy day or even when we feel unproductive. Discuss how the data is being observed, captured, transmitted and received then interpreted into communicable information. How is that data stored and for how long can it be recalled? Compare this with a large computer.
3. How do our five senses (seeing, hearing, smelling, tasting and touching) help us to form our view of the world (our world-view)?
4. How is it possible for the human eye to have 120 million rods and 7 million cones? Compare that with an owl or a chicken.
5. What is the means we have to transmit and receive information with the Lord Jesus Christ? Discuss the importance of sleep and quiet times / devotions. Discuss the vast difference between being religious and having a personal relationship with Jesus Christ.

This chapter launches a new section titled **Head** in this book. It starts by describing how our five senses receive and transmit a constant stream of data to the brain which has the ability to receive, un-code and reassemble those messages for true well-being. True healthy functioning requires a lot of communication and processing.

Well-being is an intriguing concept. It represents a premiere value in life. It is like happiness. If you pursue happiness, it may never be achieved. On the other hand, if you pursue a relationship with Christ Jesus, happiness or peace comes to you as you rest in God’s means of forgiveness and well-being. Pursue a relationship with Jesus and well-being will become yours naturally - most of the time. You can rest in Christ’s means of redemption – the Cross. In Christ, you can honestly say, “It is well with my soul”. These study guides are about the awesome outcome of a healthy human body as described by Dr. Brand.

Brand wrote, “I am most impressed by this fact – that I am totally unconscious of the process of cells encoding data then firing them off and then recoding that data and firing them again, un-coding and re-assembling them again within the brain. Brand says that “five trillion chemical operations are occurring in my brain every second”. He would ponder these activities occurring in his body. This chapter describes four of our senses. (The 5th sense of touch was covered in Fearfully and Wonderfully Made.) He calls these senses the PATHWAYS to the brain which is the Head or Command Center. Just imagine the effect on the whole body if messages from even one ceased or got cross-fired. He addressed the senses of sight, hearing, smell and taste sometimes in no clear order.

As a review of his book, Brand describes some piles of papers and work projects in his office that caused him stress so he looked out the window to see a favorite fig tree ripe with figs all covered with beautiful butterflies. He learned which figs were ripe to pick by watching which ones the butterflies were attracted to by smell but had not penetrated. He described the sound of a lawnmower with the aroma of cut grass while hearing a ship on the Mississippi River and classical music in another room. He smelled the pleasant odor of ripe figs that had fallen from the tree mixed with a more distinct and unpleasant odor of sulfur from a petro-chemical plant down by the river. Even on a lazy day when he didn’t think much was happening, he writes that a lot is happening when he considers the trillions of codes being communicated by his eyes, nose, ears and taste buds.

Though not as developed as the ears of dogs or horses, Brand writes that the human faculty for hearing is impressive. He says we can distinguish all sounds of the human speech, the drop of a straight pin or the noise of a New York subway which is one hundred trillion times louder. We wouldn’t be able to stand it if our hearing was more sensitive. He describes how the hammer, anvil and stirrup, the three smallest bones in the body, transfer the vibration of a sound into the middle ear.

These three bones, unlike all the rest, do not grow with age as they are fully developed at birth. He says that sounds actually magnify 20 times in the process of hearing. What is fascinating is that every distinct sound has a “signature” of vibrations per second. For example, the musical sound of “C” is 256 vibrations per second. The human ear can detect vibrations from 20 to 20,000 cycles /second. He says that 25,000 sound receptor cells fire off signals to the brain based on the number of vibrations. In all, the human ear can detect some 300,000 tones. Thankfully, our brain doesn’t feel the vibrations. What a headache that would be! He says the sound receptor cells take the mechanical input and changes it to an electrical output much like a cassette tape player.

Our brain pieces together the messages we hear and adds meanings and emotions from our memory and experiences. One wonders how we hear anything without filtering it incorrectly. Our memories are engaged for better or worse. As a marriage counselor, we taught couples how to use the speaker & listener technique which drastically slowed down the communication and forced the one who was speaking to offer a single clear message until it was understood by the listener. Then the listener is trained to listen clearly and not mount a defense while listening. The exercise works. We can hear things that are not being said. We can hear a familiar song which our brain can put on replay over and over for many years. Or we can recall memories vividly like the minute we first hear a tune or met a person. Those mental messages can get confused sometimes.

Brand suggests we consider a salmon fish use of its sense of smell to find its way back to the stream of its birth. Or to consider the sense of smell of a moth or a pig or a bear or a bloodhound dog! He writes; smell impels more than any other sense. Combine the sense of smell with taste and we can better understand history. It was the sense of smell and taste that drove Columbus to discover America. Most of us allow our brains to atrophy in these matters as only a few excel at tasting wine or coffee or tea or smelling perfume. Some love the unique smell of cigars which some can detect one garlic molecule in a combination of 50,000 other molecules. A bloodhound can track a person after memorizing a person’s scent. He writes that the nose is an organ of nostalgia as a whiff of coffee or perfume causes us to relive a former moment or experience. Brand with his missionary parents grew up in India where the sense of smell is celebrated. A return trip back there brought back a flood of memories. However, those overpowering sensations faded in just a few days. He says, certain jobs would be intolerable if that didn’t happen. He wondered why there are not foundations and self-help groups for people who have lost their sense of smell like we do for those who lose hearing or sight.

Brand wrote that “the sense of taste suffers in comparison to smell and, in fact, relies mostly on smell as any chef or eater with a stopped-up nose can confirm”. Brand says it takes 25,000 times as much of a substance to register on a taste bud in comparison to smell receptors. Most taste buds last maybe three to five days but the memory of a taste can last for years. As a physician Dr. Brand says a body will absorb more nourishment if the patient “primes” his body by tasting the food first. (Most of us know of Helen Keller who wrote about her personal experiences after losing her sight and hearing from a childhood illness).

Brand writes that sight shapes our understanding of the world more than any other sense. Married to Dr. Margaret Brand, an eye surgeon, Paul heard daily of both the virtues and tragedies of lost sight. (I have recently lost most of the sight in my left eye due to macular degeneration). He reminds us that the eye takes up a mere one percent of the weight of the head yet it can contain all the images of the universe. Before age related protein deposits called cataracts, the eye lens shows a startling crystalline appearance. People even attest that the eye can reflect a person’s soul.

He says that the eye is very complex as there are 127 million cells in the eye (120M rods and 7M cones). The rods are much more sensitive to light. The diversity of these two types of cells defines the nature of an animal. The owl has mostly rods to see at night while hunting while the chicken has only cones to see insects at close range. Don’t expect chickens to see down the road! Humans have both rods and cones to see close and far - even the stars. God created animals with diversity. A bat listens using radar. Dogs hear better than humans. Owls have omni-directional hearing with one ear pointing forward and one pointing backward.

We now know that vision results when light reflects off of an object not that light projects from the eye as Plato thought. So, like a camera, our lens admits and records light but the actual physical image stops with the retina. This is where the mechanical becomes like electricity so to speak. He suggests we consider space travel where we see a translation of an image on film. He says we don’t see Jupiter but a reconstruction of the electronic bits of information about Jupiter. Similarly, our brains do the same with sight.

In summary, Brand writes, “This ability to transpose units of messages – whether from the ear, nose, tongue or the eye – into ever higher strata of meaning is only possible because of the inner functions of the secluded brain”. Every bit of data provided by our sense organs terminate in the brain which he calls the Source as we will learn in the next chapter.

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