

Our Amaz'n Brain!

What an amazing brain our infinitely creative God designed to bless us with!

Our brain craves novelty. It is always searching, scanning, looking, waiting for something unusual. Notice, for instance, how we respond to the unexpected in a movie thriller or a surprising twist to a well-written mystery.

We receive millions of impressions each day, many of which are trivial. So, God also designed our brain to automatically filter the commonplace. In these arenas, our habits kick in and semi-automatically bring into play what's needed. No wonder it's so crucial to build good habits. Our brains take much of the routine and ordinary and filter out the normal to keep it from interfering with the brain's primary purpose...to record what really matters.

This cuts both ways.

This selective attention allows us to focus on what is essential without all the minutia of daily life flooding it. However, this filter may also block out important information if our filters are off kilter.

Our brain therefore carefully *encodes* what we take in, marking certain as "*can't forget.*" I'm encouraging disciples of Jesus to *intentionally* tap into how God designed the functions of our brain to accelerate learning. Deliberately work on *encoding* what's crucial to us.

Once it's encoded, our brains transfer and store this in our long-term memory in categories until needed. That's why it's so crucial to soak in a passage for a whole week and put weight on *doing* God's Word so our mind encode as: "*This is memorable!*" "*This is can't miss stuff!*"

Here is a bit of layman's understanding of how God fashioned our brains to process.

Each brain processes information using networks built from at least 100 billion cells called *neurons*. Neurons are cells in your brain link together like a super internet. Yet more. Neurons do the creative work we call thinking. Neurons send rapid signals to other neurons through the *synapses*, that is, the points where neurons connect. One single neuron can form thousands of communication connections through branching or linking structures or network called *dendrites*.

Every new experience, new action, new thought, new sensation, forms new connections through networks. God explicitly designed our brains to be our ally in learning. However, we must choose to access this feature. I'll be chatting with a grandchild and casually say: "*I wish my I-Phone could...*" Immediately my grandchild grabs my phone and says, "*Watch, Poppo. Let me show you.*" A function is useless if it's not utilized. No wonder we emphasize soaking in a passage and learning together in community "*by doing.*"

As neurons strengthen new connections, they develop *networks*. The first time neurons link up, the network connection is fleeting. If we link up again by study and reflection, by doing and experiencing the *same* concept, the link strengthens. The more times the pathway is used, the stronger the connection grows and the wider the network spreads.

How does all this relate to how we learn best in community by engaging life with truth?

Dendrites strengthen from these stimulating experiences. On the other hand, a newly formed dendrite will shrivel and disappear if we don't quickly put into practice what we have learned. A key to becoming lifelong *life-learners* is for us to fully engage ourselves to store the most important concepts of Scripture as "*must remember.*" God designed our brains to function

similar to a muscle. The more we use our brain, the more networks and branches we grow and the better we get at storage and retrieval.

How do neurons become even more effective?

One other more recent discovery about the brain fills out this picture. The **myelin sheath** is a layer of cells that grows on the outside of neurons. Myelin allows you to speed up your brain, like we can super-charge our computers. We build myelin around our neurons through “*deliberate practice*.” How do soccer players or singers improve? Certainly, they may have natural gifting, but they also master their skill through many hours of “*deliberate practice*” aimed at continuous improvement through incremental changes. *Deliberate practice* occurs best under the watchful eye of another or others who aid the training process. For us, those in our natural learning SmallGroup.

Work on a skill every day with incremental learning toward continuous improvement and we get better and better. Release the unbridled creativity in God’s image-bearers. Involved learners increase the neurons that fire.

Build layer upon layer of myelin in crucial areas. With fifty layers of myelin on each neuron, the signals may increase from 20 miles per hour up to 200 miles per hour. Our neuron network can then send 30 times more signals down the same neuron network. The overall processing in your brain can become 3,000 times more effective.

God’s plan is for other mature people to help us to process good and bad experiences. They come alongside so we can discern the healthy from the unhealthy, the life-releasing from the life-stifling. And a certain “*chaos*” exists in creativity. Creativity is not something rare or neat or packaged in an orderly way. Creativity is messy. Flashes of insight come at inconvenient times. It’s enhanced by a fun, fast-paced, uncritical exchange in a cooperative group that functions more “right-brained” in its earlier stages.

Join a host of others as lifelong **life**-learners, turning truth into experience. The head works by “*knowledge gathering*,” by observing, thinking, problem solving and correlating new information. Our heart is the core of our being and learns differently. The heart (affections, mind, will) works by “*experience gathering*” as we put truth into practice. Like digesting food, we digest experience. We walk through an event, take in what is usable and eliminate the waste.

How do insights on our brain help us grow spiritually?

First, learn how to **encode** what is crucial for our spiritual adventure with Jesus. Without these encodings, we are doomed to process most of life’s events in a manner that is difficult to retrieve. Centuries ago, Ezra had learned God’s creation design to store truth in our brain (Ezra 7:10). “*This is ‘must remember’ stuff! Store as **high priority!***” Let’s learn to align with our design.

Second, develop a “catalog system” to **embed** in your brain that reflects large categories for storage and easier retrieval. **Retrieval** seems to be the largest problem. Just like when you seek a book in the library, you go to their catalog system to find it most easily.

TIP ONE: “**Encode** Crucial Ideas as ‘**MUST REMEMBER**’”

Experts say an average adult has somewhere around 50,000 thoughts a day! God designed our minds with filters. We automatically filter out what is crucial from what is inconsequential. Over time, we train our minds to focus on what is crucial for us. Have you ever heard some criticized for having “*selective hearing?*” How do we train our mind to know what the crucial Scriptural “**must remember**” ideas are to accelerate learning by enhancing retrieval?

Our brain must believe, “*this material is ‘can’t forget’ stuff*” in order to bypass our God-given filters. In recent decades, educators have begun to grasp this. They teach us to design a wide range of creative, novel learning ideas to jazz up the drab classroom teaching. The problem is these artificial techniques are Band-Aids to an outdated adult learning philosophy.

Our 20th century learning philosophy needs major surgery.

Be careful here. Novelties by definition are “small ornaments.” To partner with the Triune God for authentic, from-the-inside-out LifeChange, we need more than ornaments or Band-Aids plastered on the outside. I believe God is calling us to a revelation in learning! Here are a few ideas to **encode** the main-&-plain, what is clear and crucial. Develop more of your own.

1. *Put the Word into practice to tap into your amazing brain.* Why does the Bible put so much emphasis on **doing** the Word of God, rather than simply studying or hearing? When truth intersects life, reflecting on this encounter brings about true learning. We don’t learn simply by studying. We learn as we put it into practice and reflect on how that truth looks in life. Stated another way: the sequence for learning is: study, do, *then* reflect to know. Active learning files crucial truth as “**must remember**” stuff. When we put truth into practice so it intersects life, retention and retrieval increase from 10% for only reading or hearing to **70%**. And if we pass it on to at least one other person, it increases to **90%**. Lets become “**90% Learners.**”

2. *Review the lesson to align with how your amazing brain works.* Review shouts “*This is ‘must remember’ stuff!*” This includes the skill called “*practiced retrieval*” that significantly increases our ability to retrieve over the long term. One of the responses in “*DiscipleMaking Companion*” when we get together is to *review* the key points we remember as a group from last week.

3. *Learn the Word in community & tell stories how truth encountered your life.* When we learn together in community and come back the next week to share a fresh story how truth intersected life, hearing these encounters helps us to see truth differently. Our minds have now received this several times and files the truth as “**must remember**” for easier retrieval.

TIP TWO: “Embed Categories in your Memory”

Certainly, we could use the excellent, recent insights regarding how the brain works to patch the old learning philosophy. My encouragement, though, is to view this research as signposts pointing to a different philosophy and practice of learning. In other words, I believe these recent studies simply point back to God’s creation design. When we shift our philosophy of learning to orient with how God formed us, we will no longer depend on a patchwork of outward techniques to artificially stimulate learning. We will become lifelong *life-learners*.

OK, so where do we store or **embed** this “*must remember*” truth? Our Team-of-Three is very well organized. Just gaze at the breathtaking universe. Or at the marvelous way the human body functions. He created us in His image. So, it comes as no surprise to me that scientific studies reflect that a mental filing system with clear categories improves our retrieval.

Have you ever been in an office where some temp filed important documents randomly? What a horror to retrieve! Our minds work similarly in optimum mode. As you read the Bible, what are the categories you presently use to store information from its sixty-six books inspired over millenniums?

How is your system working for you?