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## Communicating with the Brain in Mind

How neuroscience helps us engage people in an age of distraction.

Charles Stone

It all began in a kid's high chair. It was Christmas Day, 1987, in Laurel, Mississippi. As Tiffany, our one-year-old, sat in her pink high chair, I fed her pureed peaches. As I lifted the spoon to her mouth, I noticed that her left eye quivered like Jell-O. That didn't seem right. My anxiety immediately jumped.

The next day we got an appointment with a local doctor who recommended we see a specialist. After we drove back to our home in Atlanta we saw a neurologist who assured us it was probably nothing to worry about. However, to be safe he wanted to take a CAT scan of her brain. A week later our neurologist gave us the news that changed our lives: "Your daughter has a brain tumor."

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I don't recall the rest of the conversation, but even now I can feel the pain that flooded me after hearing those six words. Anger grew in my heart in the subsequent days. One-year-old babies weren't supposed to get brain tumors. Especially not mine.

That phone call began our 25-year journey to save Tiffany's life. After six brain surgeries, multiple hospitalizations, seeing the best medical doctors schooled in neuroscience, and much prayer, we have great hopes for Tiffany's future. We believe God used his healing power through men and women who

knew the science of the brain.

Because of Tiffany's illness, I spent a great deal of time thinking about the brain. Living in the world of neuroscience gave me questions about how the burgeoning field might impact my speaking and teaching.

The Bible supports (albeit, indirectly) learning about how our brains work. Scripture often refers to the mind (over 140 times) and to functions of the mind like memory (over 175 times). God tells us to renew our minds ([Rom. 12:2](#)) and think a certain way ([Phil. 4:8-9](#)). Jesus even tells us to love him with our minds ([Matt. 22:37](#)). He also commands us to honor him with our bodies ([1 Cor. 3:16-17](#), [1 Cor. 6:19-20](#)), which of course includes our brains. It makes sense that we would seek to understand our brains and use our insights about it to become better communicators.

### Attention Deficits

There are several factors working against us. Here are just a few.

Brains are easily distracted. The brain is rather lazy. Your mind would rather wander than pay attention because it takes more energy to focus. As I write this article, I sit in a local McDonalds (free Wi-Fi and free refills of Diet Coke). To help me focus, I face a wall to block out visual distractions and listen to the sound of a babbling stream through my sound suppressing headphones. Yet I constantly battle to maintain focus. I sense people moving behind me, hear the muffled sounds of screeching kids, and feel tempted to check email. For my brain, distraction is easier than focus. Your listeners face the same challenge when you speak.

We live in a hyper-connected world. Lack of attention in our 24/7 media-saturated world has become one of the biggest challenges communicators face. Linda Stone, a leadership consultant, describes our current distracted culture with the phrase "continuous partial attention," a semi-attentive state in which people continuously "scan for opportunities, activities, and contacts." This distraction doesn't disappear in our churches and classrooms. It's no longer the fussy baby that distracts us. Smart phones provide instant access to other distractions like Twitter, Facebook, and texting. At my church we live-stream our services. I recently learned that some people in our church watch me online while I preach, even though they are sitting in the auditorium listening to me live at the same time. And the feed is delayed by seven seconds. Go figure!

Rampant dopamine addiction: Dopamine addiction is fast becoming a major obstacle to maintaining attention. Dopamine is one of the main chemicals in our brain involved with attention, reward, and motivation. Over 100 of these chemicals called neurotransmitters traffic in our brains and nervous systems. Dopamine gives us that nice sensation when we put the final touches on a sermon or see an uptick in our blog followers. It makes us feel good when we accomplish a goal or consume an energy drink. Dopamine provides a pleasant emotional kick. However, when the brain becomes addicted to it, it leads to other destructive addictions and harmful habits. We constantly seek these small "feel good" kicks. It could

be as seemingly innocent as constantly checking email or Facebook hoping to see something positive or interesting or as destructive as drug or sex addiction. When people are accustomed to regular dopamine hits, it can be incredibly difficult to sustain their attention when we speak.

## **Increasing Density**

Jeffrey Schwartz, a Christian neuroscientist, coined a term that captures an important idea to consider in sermon prep. The term, *attention density*, refers to mental focus and concentration. At a neurological level, the greater the attention density, the more brain real estate gets involved. And here's the crucial thing: the higher the attention density, the more people remember. So if we want listeners to remember our sermons, we not only have to concern ourselves with good exegesis and sound hermeneutics; we must also include ways to increase attention density.

Some brain-based densifiers (sounds strange, I know) include application, humor, testing (asking listeners to repeat your point), and spacing (breaking up your talks with other elements like music or drama). Below I suggest a few other principles that can help densify your listeners' attention.

## **Nudge with Novelty**

Neuroscientists have discovered that novelty can increase attention and aid learning. Be sure to begin, illustrate, and deliver your sermons creatively. When we surprise our listeners with a new way of explaining a point, the brain feels rewarded with a burst of dopamine. I've heard church people effuse about a new speaker they heard on a podcast or at a conference. I don't tell them, but much of the impact from that new speaker is due to novelty. If they heard the speaker every week, like they do me, he probably wouldn't pack the same punch he did the first time they heard him. Novelty excites.

In each talk illustrate or highlight a point in a different way. It can be as simple as using a flip chart to write out a point rather than counting on the standard power point slide. Or you can use an object lesson. Object lessons work so well because one-third of the brain circuits are involved with visual perception. I once spoke on how small decisions we make can sap our passion for life. I used a heart-shaped, helium-filled balloon and poked a few pinholes in it. Throughout the talk it slowly lost buoyancy and vividly illustrated how our slow loss of passion can result from small poor decisions, like the pinholes in the balloon.

At the same time, guard against placing too high a premium on novelty. Novelty grabs attention best when used sparingly. If you constantly employ novelty, it won't be novel anymore.

## **Stir with Story**

We all love stories. The most popular TED talks often revolve around stories. When we only use abstract concepts, we only engage the language centers of our brains. However, when we tell stories, we engage many more parts of our brains. For example, when we tell stories that include motion (I ran at breakneck speed from the charging bear) our motor centers light up. Or when we tell a story that includes something about food (the seafood buffet had the largest shrimp I've ever seen) our sensory cortex lights up.

When we share a story, it's as if the listener vicariously experiences it as well, engaging many more parts of the brain than story-less talks. The more parts of the brain that get engaged, the more your listeners' attention increases and the more likely it becomes they will remember what you say. Story works like a symphony conductor. When he raises his baton and leads an orchestra, all the instruments become engaged at his direction to make a coherent sound. Storytelling does the same thing for our brains.

One caveat: don't tell complicated stories. The simpler, the better. And remember the popular writing maxim: show, don't tell. In other words, great storytellers paint verbal pictures by vividly describing scenes rather than merely giving the facts about what happened. Sharing stories in this way will enable your listeners to not only remember your talk but enjoy it as well.

## **Engage with Emotion**

We remember emotionally charged experiences better than those experiences we don't associate with emotions. For example, you probably remember where you were when you first heard about the 9/11 terrorist attacks. The visual and emotional experience seared the event in your memory.

The emotional center of our brain, the limbic system, and specifically two almond shaped clusters of brain cells in it called the amygdalae, use emotion to stamp memories into our brains. Although some speakers can wrongly use emotion simply to make people cry, when appropriately used emotion can powerfully help listeners remember and absorb your talk's crucial points.

Recently I spoke about staying committed in marriage, especially through tough times. At the end of my talk I showed a two-minute video clip about a well-known college president who made the difficult decision to resign his position and take care of his wife full-time when he discovered she had Alzheimer's. The tastefully done video reinforced marriage commitment by connecting emotionally to the viewer.

Be cautious about using too much emotion because it can overload the brain and become a distraction itself. After using emotion, pause or slow down to give your listeners time to process their emotional reaction. Linger at that moment or they will miss what you say next.

That fateful phone call 25 years ago started an incredible learning journey about how the brain profoundly impacts, life, leadership, and communication.

I pray that this brief look at neuroscience and communication will spur your own learning journey about God's incredible gift to us, the brain. *Charles Stone is is pastor of West Park Church in London, Ontario, and author of Brain-Savvy Leadership: The Science of Significant Ministry,*