Chapter 10

Three Brain-Friendly Skills Easily Overlooked

Brain Surprise 10: *If you need a boost of motivation, simply thinking about chocolate might help.*

Thus far I've unpacked acronyms that describe four essential leadership domains that brain insight can help us improve, two in the self-leadership category and two in the team leadership category. With the Holy Spirit's help, we'll become better leaders when we learn to control our emotions, improve our personal productivity, grow teams, and manage change well. These four domains certainly don't cover every leadership competency. It would take volumes to cover every area. However, I felt that three other areas warranted a combined chapter: brainstorming and creativity, giving answers to your team rather than fostering their insight, and feedback/performance reviews.

As a Christian leader, I believe that God gives each of us unique gifts and talents that he wants us to use for his purposes and glory. And the more we're able to incorporate God's truth, whether it comes from God's word or from really smart people who know a lot about the brain, the more God is honored. So in addition to the four domains I've already discussed, consider these next three areas through a Christian worldview and consider how they might enhance your pastoral or marketplace leadership.

Brainstorming and Creativity

Alex Osborne published a book in 1948 called *Your Creative Power* in which he described the creative secrets he had learned from his advertising agency, B.B.D.O., one of the most successful at the time. His most-often used idea was brainstorming. He believed that the best way to generate ideas was to attack the same objective to find multiple solutions. Two key assumptions set apart brainstorming from other group activities: go for quantity instead of quality ideas, and don't allow anyone in the brainstorming session to criticize the ideas. He believed that if people worried that others might criticize their ideas, the process wouldn't work. Fear of criticism would stifle people from offering their ideas and decrease their number, or so he thought.

Brainstorming is now one of today's most widely used creative tools. The problem is this: It doesn't work, at least in the way it's usually used. It actually stifles creativity, and many studies since Osborne's book have proved it. The first study was performed at Yale University in 1958 (Taylor et al., 1958). It involved forty-eight male undergraduates divided into twelve brainstorming groups who were given a series of creative puzzles to solve. The study also included a control group of another forty-eight students given the same puzzles to solve. The results? The individual students created twice as many solutions as the solutions from the brainstorming groups.

So if traditional brainstorming falls short, what's the best way to generate ideas? Should you totally eliminate these sessions? No. But if you change the rules to allow appropriate criticism and debate, your creative sessions can yield greater results, as one researcher discovered. Charlan Nemeth, a psychology professor at the University of California–Berkley, performed a creativity study in 2003 (Nemeth et al., 2004). She divided 265 female students into groups of five and asked them to generate as many ideas as possible on how to decrease traffic congestion in the San Francisco Bay area. Each team received one of three conditions and was given twenty minutes to complete the task. Either they used the traditional "no criticism" brainstorming technique, or they generated as many ideas as possible but could debate and criticize each one, or they received no instructions. The "debate and criticize" teams generated 20 percent more ideas than the other two groups.

So if you want to increase the number of ideas, encourage your teams to generate as many ideas as possible, but don't stop there. As they generate ideas, encourage them to debate and criticize them, all with the right spirit,

of course. When you do this, you create greater mental engagement and force team members to reassess their own ideas, which results in more ideas. Debate also adds the element of surprise that engages the brain.

Two other ideas can add to your team's creativity. One study on what made Broadway musicals successful found that creative teams that included both familiar people and newbies produced the most successful musicals (Ellenberg, 2012). Another study done on scientists themselves discovered that the best quality papers came from scientists whose offices or labs were relatively close to each other, less than ten meters apart (Ruder, 2011). In fact, one of the most famous legends of innovation, a building called Building 20 at MIT, gave us radar, microwaves, and the first video game. Scientists were haphazardly crammed into this old building, and its design forced solitary-minded scientists to mix and mingle. Their chance meetings spurred conversations and innovation.

So consider these tips to help improve your team's creativity:

- When you brainstorm, encourage debate, dissent, and healthy criticism of ideas. Set these rules beforehand, though, to keep the debate healthy and avoid an away response.
  - Don't personally attack people.
  - Use such phrases as, "I have a different view," "I see things differently," or "What about this?"
  - Reiterate the other person's viewpoint before offering your own.
  - Clarify the other person's viewpoint first.
- Keep your creative teams diverse. Include new people and women and men.
- Make sure the brainstorming leader is affirming and not overbearing and that he or she doesn't unintentionally drive a personal agenda.
- Create spaces in your office that encourage frequent and spontaneous interactions.
- Don't allow one person to dominate brainstorming sessions. Sometimes a "know-it-all" can shut down creativity.

- Be observant of something called "social loafing," our tendency to feel less responsible for a project in a group than when doing a project alone. Some on your team may sit back and let the rest of the team generate the ideas. Guard against that. Studies with a rope tug-of-war showed that blindfolded people who believed they were pulling a rope alone pulled 18 percent harder than those who thought they were on a team (Karau & Hart, 1998). However, the more cohesive the group, the less social loafing there is.
- When beginning a creative session, the leader should acknowledge that everyone is on equal footing and that he or she wants everyone to feel that they can contribute.
- Before your brainstorming session, ask the team members to generate ideas on their own and to submit them in writing before the session. Sharing that list as you begin will foster even more ideas.
- Be wary of too much group harmony in creative sessions. Artificial harmony that fosters a "too nice" atmosphere can stifle appraisal of alternatives.
- When trying to solve a problem in a brainstorming session, challenge the group to present counterintuitive solutions (i.e., what's obviously not the solution to the problem). This approach can foster even more creativity.
- Provide an incubation period to let ideas simmer. If you give the team a brain break and encourage daydreaming, when they come back to the problem, solutions often arise (Sio & Ormerod, 2009). Sometimes ideas come to us while doing something moderately taxing and daydreaming at the same time (e.g., taking a shower or walking on a treadmill). It's called unconscious thought theory, or UTT (Dijksterhuis & Nordgren, 2006). UTT proposes that solutions to complex problems often come when we are not intentionally trying to solve them.
- When trying to solve problems, encourage your team to imagine themselves a year from now instead of imagining themselves tomorrow. Studies show that this time perspective fosters more creativity (Förster et al., 2004).

Giving Answers vs. Fostering Insight

Wise leaders encourage their teams to solve their problems with their own insight rather than with the leader's insight. When a staff person or a volunteer brings a problem to us, it's often easier and less time-consuming to give them advice and solve their problem. Yet in the long run such a response can foster dependency on us to solve their problems and diminish their motivation simply because the solution isn't theirs. And people are less likely to act on somebody else's ideas anyway. So how can we replace "answer giving" with self-generated insight?

Although related to brainstorming and creativity as discussed earlier, fostering individual insight deserves its own explanation. Insight is a solution to a problem that recombines what we know in a new and fresh way that often leads to creativity. Rather than solving a problem analytically, when we turn our attention outwardly on the problem, insight occurs when we turn our attention inward and become less focused on the problem. This inward focus can help us experience a sudden "aha" solution. This historical illustration about insight describes the "aha" process well.

We use the word *eureka*, attributed to Archimedes (c. 287–c. 212 BCE), to describe an "aha" moment, a flash of insight we sometimes get. As a brilliant scientist in antiquity, Archimedes is perhaps most known for a story about his inventing a method to determine an object's volume. A goldsmith had forged a crown of gold for the then king, King Hiero II. He was concerned, however, that the goldsmith had substituted the cheaper metal, silver, for some of the gold. He asked Archimedes to find the truth without melting the crown. This stumped Archimedes until a flash of insight appeared to him.

As the famous story goes, one day as he took a bath, he noticed the water level rise as he stepped in. Suddenly he realized that by making a few mathematical calculations, he could use water volume displacement of the crown to determine if it was indeed made of pure gold. In his excitement, he ran into the streets naked, crying, "Eureka, Eureka!" which means in Greek, "I have found it." Thus, we use the word *eureka* for insight. Through this insight he then discovered that the goldsmith had indeed substituted silver for some of the crown's gold. I'm sure the king's *Panic Alarm* went off when he heard the news (and the goldsmith's when he got caught). Archimedes had discovered an insight in a moment when he wasn't even thinking about the problem. When we get a "eureka" or an "aha" insight, we just know the answer without

actually knowing how we got it. The insight doesn't come piece by piece, but usually all at once.

Researchers who study insight use a word game called Compound Remote Associate (CRA) problems. Study participants try to create three two-word phrases from three words that could share a common word. For example, consider these three words: *barrel*, *root*, and *belly*. What two-word phrases can you create that share a common word? Participants often use the word *beer* to create *beer barrel*, *root beer*, and *beer belly*. After they solve the problem, they press a button to indicate how they solved it, either logically or with an "aha" insight. Using both EEG and fMRI, neuroscientists then examine their brain functioning to learn what happens during insight (Jung-Beeman et al., 2008).

Through these studies they've discovered a process that occurs in our brain when it receives an insight. First, our brain is at rest in the default mode. We may be daydreaming or our minds may be wandering. MRI studies show that at this stage, the alpha wave (the wave active when the brain idles during daydreaming and relaxation) spikes. This indicates that our brain is visually gating (Sandkühler & Bhattacharya, 2008), reducing the visual input it's processing to reduce distractions. This is in contrast to the brain's dominant wave, the beta wave, which is active during visual focus and alertness. The alpha wave shows that our *Error Detector* is more active prior to an insight. This makes us more aware of competing alternatives and enhances our predisposition to switch between different solutions (Beeman, n.d.), potentially creating an insight. That is, if one solution doesn't work, the brain will try another. Our *Error Detector* helps orchestrate attention since it is so highly connected to the rest of the brain.

Finally, at the moment an insight occurs, the gamma wave spikes (Kounios et al., 2006). You'll recall that the gamma wave, the fastest brain wave, sweeps across the entire brain forty times per second to bring our brain to attention, much like how a conductor synchronizes an orchestra when he raises his baton. The gamma band activity indicates new brain maps are being formed, the insight. And when that happens it literally feels good because neurotransmitters are released. As the insight occurs at the point of gamma synchrony, right hemisphere activity also increases to help us make connections with subtle associations we might have otherwise missed. The brain's right hemisphere, which processes information more intuitively and holistically, apparently drives the insight process.

I envision a setting ripe for insight akin to a guy drinking lemonade while sunning in a lounge chair at the beach. Then, as he reads a fishing magazine, the solution to a nagging work problem suddenly pops into his mind. That image contrasts to his intense mental state a week prior at work when he tried to solve the problem, much like what Rodin's famous sculpture *The Thinker* pictures. So insights are more apt to come when our brains are less focused and more rested.

Consider these tips to help your team learn to develop insight:

- **Daydreaming:** Insight often comes when we daydream and allow our minds to wander (Christoff et al., 2009). Teach your team how daydreaming can help them solve problems. Encourage your team to schedule times to daydream and to allow their minds to wander rather than always actively trying to solve problems. Help them realize that thinking less about a problem may actually bring about the solution. In fact, some companies, such as Google, Intuit, and Twitter, expect their employees to take time for daydreaming about projects other that than those they're working on (Waytz & Mason, 2013). Of course, analytical process solving or a mixture of analytical and daydreaming might make more sense in some situations.
- **Mood:** When we are in a positive mood, problem solving often comes more easily (Subramaniam et al., 2008). Yet when we're anxious, we solve fewer problems because the anxiety uses up brain resources. So if you're facing a dilemma in your organization, it might help if the team watched a funny movie to stir the creative juices.
- **Location:** Encourage your team to discover the kinds of activities that help put them into an insight state. Two settings have helped me generate insight. Ideas pop into my mind when I read and walk at a reasonable pace on my treadmill. Insight also comes more readily when our family leaves for vacation while it's still dark. I'm the driver, and I'm usually the only one awake that early in the morning. With little roadside distraction, my brain has generated many good ideas during those three or four hours of solitude.

- **Application:** Although insight gives us a nice dopamine rush, we all know that the feeling eventually wears off. Remind your team to record their insights in an easy-to-remember location so that they won't forget them. Even if your team member can't immediately act on an insight, getting him or her to commit to acting on it at a later time can help translate the insight into action (Rock, 2007, p. 108).
- **Speed:** If you're working with team members who are trying to find a solution to a problem, don't rush the process. Give them time to engage their brains. Allow space in conversations, and encourage those team members to carve out some down time to give their brains a break.
- **Pattern:** In David Rock's book, *Quiet Leadership*, he recommends a four-step process to help foster insight. He calls it the "dance of insight." I've summarized it here (Rock, 2007, pp. 111–50).
    - Permission: ask permission to have a conversation with another about an issue or to go deeper on an issue before launching into it (without necessarily using the word *permission*).
    - Placement: clearly explain these components of a conversation: what it will be about, what's going to happen in it, what you hope to accomplish by it, and what you'd like the other person to do during the conversation. In other words, placement answers these questions: why, when, how, and who?
    - Questioning: learn to use powerful questions to encourage your team members to do their own thinking rather than offering them advice. Focus questions more on solutions and less on problems and details. In this stage you're helping them focus on their own thinking.
    - Clarifying: clarify the answers team members give to your questions to help them verbalize what they are not saying that they should be saying. Clarifying can help them realize what's behind their words. Although a form of paraphrasing, clarifying is a higher level of conversation.

Rock captures the "dance of insight" this way:

> It's about getting permission before getting personal, then making sure you're both on the same page before asking a question, then asking questions that create new maps in people's minds. As you quietly facilitate this dance, you'll see people's faces changing as they move from the awareness of a dilemma, to reflecting, to having illumination, and then being ready to take action. (Rock, 2007, p. 150)

Feedback and Performance Reviews

We naturally resist feedback because we don't like somebody else trying to change us. However, change is the essence of sanctification, how the Holy Spirit forms us into Christ's image. And the book of Proverbs often uses the word "fool" for someone who resists change and counsel from others. Yet, even for Christians feedback often feels threatening.

In the previous chapter I referred to a study that discovered that giving feedback through performance reviews often doesn't work. In that study the researchers discovered that only 30 percent of the time did performance reviews improve performance (Kluger & DeNisi, 1996). Not only do most performance reviews fail to yield results, but also they may actually diminish the self-esteem of those we evaluate, as this study reflected.

One study involved a simple experiment on college students. The students first held a mock interview. Afterwards, as they lay in an MRI machine, they received evaluations on their performance through forty-five separate evaluative words given by someone who observed their interview. The words were equally divided into fifteen neutral ones, fifteen positive ones, and fifteen negative ones. Even though the positive and neutral words outweighed the negative ones two to one, over 40 percent of the students experienced lower self-esteem. And the part of the brain that experiences rejection from others lit up in the scanner (Eisenberger et al., 2011).

I understand this insight through personal experience. Years ago a key leader in a church I led repeatedly told me that although I possessed great character, my teaching didn't connect with the people's hearts nor did I have sufficient leadership skills to bring the church to the next level. He assumed that his positives outweighed the negative. They didn't. My self-esteem suffered a blow, and after reading this study, I now understand why I felt so discouraged after his comments.

So if feedback potentially hinders performance rather than helps, should we eliminate it? No. We need feedback, and so do our teams, so that we all can grow. I believe that if you redesign your feedback process by incorporating some simple changes, you can make your feedback and performance evaluations effective. As you evaluate your process and incorporate the ten "C"s of a good feedback system that I list in the next section, first consider these six foundational thoughts:

1. The traditional "sandwich" technique usually doesn't work. This technique sandwiches the negative between two positives. If you've ever experienced such feedback from someone, you probably only remembered the negative one and not the positive ones.
2. We usually experience traditional feedback as an away response rather than a toward response because it feels threatening. That is, such feedback often triggers our *Panic Alarm*, which evokes fear and defensiveness. This causes our *CEO* to go offline, and we can miss the benefits from the feedback.
3. Feedback often unintentionally focuses on the person's identity, who they are, rather than on the behavior or their tasks. When that happens, we feel threatened and hear little else.
4. Most feedback systems are based on one-off annual reviews. Such feedback rarely sticks and often creates employee stress that reduces productivity leading up to and following the reviews.
5. Response to the gaps given through feedback can result in any of these four behaviors in the reviewee: change of behavior, change of goals, rejection of the feedback, or simply avoidance of others or the tasks (Smither & Walker, 2004).
6. Reviewees usually pay more attention to qualitative feedback (narrative comments) than they do to quantitative evaluations (Smither & Walker, 2004).

I've categorized the ten "C"s into two categories. One category directly relates to the *person* who's receiving or giving a review. The second category, the process, relates to issues about the process itself.

The Person

- **Community:** The person receiving the review ideally should feel relationally connected to the reviewer (Ibarra, 1999). When a reviewee has a relationship with the reviewer, he's more likely to receive the feedback (Dixon et al., 2010). When the reviewee feels threatened, though, the feedback is more likely to be ignored. Proverbs 27:6 illustrates this idea: "Trustworthy are the bruises of a friend; excessive are the kisses of an enemy." If you are the leader, try to forge a relationship before giving feedback.
- **Coachability:** Help the reviewees be coachable. Help them see the value of the review process (Atwater & Brett, 2005). The more open they are to changing, the more likely they will actually change and grow from feedback.
- **Connected to their goals:** The reviewees must connect feedback they receive to how they see themselves in the future (Kluger & DeNisi, 1996) and to their larger goals (Ashford et al., 2003). We more easily receive feedback when it's connected to our future goals. In the feedback process, help the reviewees get a picture of how they can become better leaders, pastors, volunteers, board members, or staff persons through the feedback process. Give them a vision of the future by connecting the proposed changes to their goals. Help them connect the change to how it can positively affect them by improving their performance. Perhaps a better term would be *feed-forward* (Koen et al., 2012) instead of *feedback*.
- **Content versus person focused (DeNisi & Kluger, 2000):** Since the brain has five times more negative networks than positive ones (Baumeister et al., 2001), feedback should focus on the problem and the behavior rather than on a person's personal defects (Dixon, 2013). And rather than dissecting the problem, focus on potential solutions that solve the problem or improve performance. When we focus on the content rather than the person, we can take the emotional charge out of the conversation and the potential status threat. When we feel socially threatened, our brain's *Panic Alarm* engages just as if we faced an actual physical threat.

The Process

- **Credible:** The reviewee must see the reviewer as unbiased and informed (Waldman et al., 1998). Get your facts straight before giving feedback.
- **Clarify through self-feedback:** The most effective feedback often comes through the reviewees first evaluating themselves. I've usually begun my reviews with a self-evaluation assessment tool the team members complete on themselves before the interview. This provides good talking points and an entrée into discussing other topics. In addition, when reviewees feel as if they contributed to the feedback process, they'll sense greater control and more autonomy, which can help put them into a toward state.
- **Coaching:** Although similar to coachability, coaching involves you as the leader. Include as part of the feedback process follow-up through coaching. After a review, provide a written summary to the reviewee that outlines the specific behaviors and tasks you want the team member to do. Phil Dixon, an expert on feedback systems, has concisely captured the importance of coaching follow-up with this statement: "Feedback without follow up is futile" (Dixon, 2013). This step, perhaps more than any other, will make the greatest difference in how well feedback will effect change. Coaching will reinforce and spur progress.
- **Closeness:** Feedback is best given in close proximity to the time a team member does something that needs correcting or changing (Dixon et al., 2010). Don't wait until the formal evaluation cycle to give feedback. Real-time feedback yields the best results.
- **Collaborative:** The process ideally includes peers and superiors (London & Smither, 1995). Three hundred sixty degree reviews, when incorporated with the other "C"s, can add great value to the feedback process. However, be sure to clearly explain to your team member how such reviews work. I once did a 360 degree review and didn't sufficiently prepare the team member for how it would be used. It did more harm than good.
- **Culture infused:** Use feedback regularly as an ongoing experience for your team. If you infuse it into your culture as a positive

and helpful developmental tool, it won't seem as foreign to your team as the traditional annual review often feels. One way to do this is to regularly teach about its value, especially before formal reviews begin. When you teach, remind your team that we all may feel uncomfortable with feedback but that such discomfort can help us grow and become more productive. Cueing up your team in this way will bring more certainty and moderate an away response.

In this chapter we looked at three other brain-friendly, moment-in-time skills: brainstorming, fostering insight, and feedback. Consider applying these insights in advance of brainstorming, as your team asks you for advice, and before you give feedback. Incorporating even some of these small changes can bring significant results.

The science behind . . . *Brain Surprise 10*: *If you need a boost of motivation, simply thinking about chocolate might help. (Georgia Health Sciences, 2011)*

Most people love chocolate. Although the benefits of chocolate in moderation, especially dark chocolate, have been touted for years, recent research has shown the brain benefits. One researcher says that eating chocolate, or just the thought of doing so, can stir a mild production of dopamine, the reward and motivation neurotransmitter. So the next time you need a bit of an emotional or motivational boost, and don't want additional calories, daydreaming about chocolate may do the trick, at least for a few minutes.