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Gratitude as a Spiritual Path: The Art of Ministry from the Heart

Abstract

This paper explores the theological roots of gratitude as a virtue within the Judeo-Christian tradition, and will follow scientific dispositional dimensions of gratitude. Compared with the relatively recent attention to gratitude in the field of education, it is no surprise that religious education has yet to address the effects of gratitude. To this end, I invited seventeen Mongolian Bible college students to participate in an experiment of practicing gratitude for a period of one semester of 2013. Using the results from the Mongolian experiment, I explored the power of gratitude by identifying the dynamics of the physical, psychological, social and spiritual benefits, especially those emerging from the new discipline of neurocardiology and brain science. The focus of my research is twofold: exploring God’s call to gratitude, and identifying the benefits of gratitude observed through current scientific research. The results can build upon and broaden the discussion of how gratitude enhances our spiritual, psychological and physical well-being and wholeness. These findings, I hope will make a modest contribution to the field of theological education. More broadly, I propose that the cultivation of gratitude be considered an essential imaginal entry point for the discipline of religious education.

Gratitude has been the object of study in the disciplines of sociology, moral philosophy, ethics, and politics. It has also been recognized as a moral and a spiritual virtue, as well as an emotional disposition in Christianity, Judaism, Islam, and other major religions. In the last 16 years, many social science researchers have observed that practicing gratitude enables people to experience healthier hearts, positive emotions and relationships, increased longevity, and deeper intimacy with God¹. As one researcher concludes, gratitude yields notable power and benefits: “Gratitude broadens people’s modes of thinking, which in turn builds their enduring personal and social resources. Gratitude appears to have the capacity to transform individuals, organizations, and communities for better²”.

Recent research projects have explored gratitude from various aspects. For instance, a study by Lyubomirsky, Sheldon, and Schkade³ concluded that the set-point of happiness or

¹ Greater Good Science Center. Retrieved from <http://greatergood.berkeley.edu/gratitude>

² Fredrickson, B. L. (2004). Gratitude, like other positive emotions, broadens and builds. In Emmons, R. A., & McCullough, M. E. (Eds.). (pp. 145-166). *The psychology of gratitude*. New York, NY: Oxford University Press. p. 159

³ Lyubomirsky, S., Sheldon, K. M., & Schkade, D. (2005). Pursuing happiness: The architecture of sustainable change. *Review of General Psychology*, 9(2), 111.

gratitude is determined by 50% of one's genetic code, 40% of deliberate efforts, 10% of one's environments. Another study points out that gratitude must be intentionally cultivated because one cannot increase one's level of happiness or gratitude without practicing a certain degree of reflection and retrospection⁴. One recent study concludes that candidates who count their blessings every day through practicing cognitive habits raise the level of their set-point of gratitude and happiness⁵.

In the discipline of positive psychology, gratitude is recognized as one of 24 character strengths that lead people to live purposeful and prosperous lives⁶. Researchers observe that individuals with gratitude as a character strength are connected to a deep cognizance and recognition of goodness in their lives.

Howells, in *Gratitude in Education*, points out that gratitude plays a central pedagogical role in education⁷. Her qualitative study explores the positive outcomes in the teaching-learning process when pre-service teachers think with a thankful heart. Cummings⁸ and Pelsner⁹ further strengthen Howells' observations in two ways: the use of an enlarged sample size and length of work and the documentation of the flow-on effects of gratitude based on the teaching-learning experience.

Religions and philosophies have long considered gratitude to be an indispensable expression of virtue, and an integral component of health, wholeness, and well-being. Studies in behavioral psychology have also observed the surprising life improvements that can result from the practice of gratitude.

This paper explores the theological roots of gratitude as a virtue within the Judeo-Christian tradition, and will follow scientific dispositional dimensions of gratitude. Compared with the relatively recent attention to gratitude in the field of education, it is no surprise that religious education has yet to address the effects of gratitude. To this end, I invited seventeen Mongolian Bible college students to participate in an experiment of practicing gratitude for a period of one semester of 2013. Using the results from the Mongolian experiment, I explored the power of gratitude by identifying the dynamics of the physical, psychological, social and spiritual benefits, especially those emerging from the new discipline of neurocardiology and brain science.

⁴ Froh, J. J., Miller, D. N., & Snyder, S. F. (2007). Gratitude in children and adolescents: Development, assessment, and school-based intervention. In *School Psychology Forum*.

⁵ Watkins, P. C., Usher, J., & Pichinevskiy, S. (2014). Grateful recounting enhances subjective well-being: The importance of grateful processing. *The Journal of Positive Psychology*, 1-8.

⁶ Peterson, C., & Seligman, M. E. (2004). *Character strengths and virtues: A classification and handbook*. Washington, DC: American Psychological Association.

⁷ Howells, K. (2012). *Gratitude in education*. Rotterdam: Sense Publishers.

⁸ Howells, K., & Cumming, J. (2012). Exploring the role of gratitude in the professional experience of pre-service teachers. *Teaching Education*, 23(1), 71-88.

⁹ Pelsner, J. N. (2013). *Adventures in gratitude: Exploring the possibilities of gratitude in education*.

Unpublished thesis. University of Cambridge.

The emerging science demonstrates that feelings of gratitude produce a direct and powerful impact on our physical and spiritual well-being. Both positive and negative emotions affect our hearts, our brains, and even those around us. For example, positive emotions like love, compassion, and appreciation stabilize the physiological reaction. They settle heart rhythms into a steady, coherent sequence. However, negative emotions like anger, frustration, and resentment can traumatize our bodies into a state of great anxiety and stress, generating toxic hormones in our body, leaving our brain on alert.

Recent research in the new discipline of neurocardiology shows that the heart is a sensory organ and a complex center for receiving and governing information. The nervous system within the heart (or “heart brain”) allows it to learn, recall, and make reasonable judgments independent of the brain’s cerebral cortex. Furthermore, plentiful tests have verified that the signals the heart endlessly directs to the brain affect the role of higher brain centers engaged in awareness, reasoning, and emotional processing¹⁰.

The focus of my research is twofold: exploring God’s call to gratitude, and identifying the benefits of gratitude observed through current scientific research. The results can build upon and broaden the discussion of how gratitude enhances our spiritual, psychological and physical well-being and wholeness. These findings, I hope will make a modest contribution to the field of theological education. More broadly, I propose that the cultivation of gratitude be considered an essential imaginal entry point for the discipline of religious education.

Grace and Gratitude

Thirteenth-century theologian Meister Eckhart posits, “If the only prayer you say in your life is ‘thank you’ it would be enough¹¹.” Gratitude is a hallmark of spiritual maturity and a cardinal virtue in Scripture: thankfulness is cited 150 times and classified as a commandment in all circumstances 33 times. In the New Testament, the Apostle Paul exhorts the Thessalonians: “Be joyful always; pray continually; give thanks in all circumstances, for this is God’s will for you in Christ Jesus” (I Thess. 5:16-18).

In the Old Testament, gratitude is corporately and communally practiced to testify to God’s goodness in the whole faith community (Miller, 1994). “Give thanks to the Lord for He is good; His love endures forever” (I Chr. 16:34, Ps. 106:1, Ps. 107:1, Ps. 118: 1, 29, Ps. 136:1). Karl Barth writes, “Grace and gratitude go together like heaven and earth: Grace evokes gratitude like the voice and echo¹².” John Calvin (1509-1564)¹³ in the “Institutes” eloquently

¹⁰ The Resonant Heart - HeartMath Institute, <https://www.heartmath.org/research/research-library/relevant-publications>.

¹¹ Cited by Emmons, R. A. (2007). *Thanks! How the new science of gratitude can make you happier*. New York, NY: Houghton Mifflin Harcourt.

¹² Cited by Emmons, R. A. (2007). *Thanks! How the new science of gratitude can make you happier*. New York, NY: Houghton Mifflin Harcourt.

¹³ This second-generation Protestant Reformer published *Institutes of Christian Religion*, which was later expanded to four volumes and 80 chapters. Key themes of Calvin's theology in the *Institutes* highlight the unmerited and ever-present grace of God poured out upon fallen humanity, and restoration of the broken image of God.

states that there is nothing in the universe more powerful than the sovereign grace of God. In return for God's sovereign and amazing grace, we as human creatures are to respond to God with gratitude as God's children. God's grace deserves our gratitude. The theology of Calvinism, otherwise known as Reformed theology, can be summed up in the phrase, "grace and gratitude." It is the great rhythm of the Christian life and the movements that define our Christian identity.

Reformed theologian Brian Gerrish describes how Calvin's theology of the Lord's Supper orchestrates these movements in *Grace and Gratitude: The Eucharistic Theology of John Calvin*. He cites Calvin's earliest version of the *Institutes* (1536): "In this sacrament...the Lord recalls the great bounty of his goodness to our memory and stirs us up to acknowledge it; and at the same time he admonishes us not to be ungrateful for such lavish liberality, but rather to proclaim it with fitting praises and to celebrate it by giving thanks¹⁴". Gerrish eloquently captures Calvin's "teaching on the Lord's Supper into harmony with other parts of the whole. In itself, the meal is a gift of God, but—like every gift—it is also an invitation to give thanks¹⁵." God offers the "spiritual banquet" in the supper, and in return, we express our deepest gratitude and praise! The holy banquet is the liturgical performing of grace and gratitude that lies at the heart of Calvin's entire theology, in short, a 'eucharistic' theology"¹⁶.

Prominent Evangelical scholar Kevin Vanhoozer describes the gospel as the triune "theodrama" of redemption that is God's "communicative action" in Jesus Christ¹⁷. The world is the theater of God's glory and grace. The drama of salvation is being played out on the stage of the world. "Life is divine-human interactive theater," he accentuates, "and theology involves both what God has said and done for the world and what we must say and do in grateful response¹⁸". Here faithful participation and engagement in the world with gratitude is a central part of Christian life. In other words, "Theodrama" involves relationships in which Christians perform truthful propositions (beliefs), experiences (feelings), and narratives (actions) to reflect God's absolute revelation in Christ¹⁹. God's saving work through Christ's incarnation revolutionizes our thinking by redirecting our attention to the Spirit that empowers us to live lives of gratitude to the Father. In Vanhoozer's view, the church needs to be a community that tells the "theodrama" well:

The church is a performance aimed not at earning but at exhibiting the righteousness of God, the life eternal, and the hope of the world. To perform the drama of doctrine is to do and become a constant display of faith and faithfulness, grace and gratitude, mercy and love. *This glorious show must go on*²⁰.

¹⁴ B. A. Gerrish (2002). *Grace and Gratitude: The Eucharistic Theology of John Calvin*. Wipf & Stock p19.

¹⁵ Ibid.

¹⁶ Ibid. p20.

¹⁷ Kevin J. Vanhoozer (2014). *Faith Speaking Understanding: Performing the Drama of Doctrine*. Louisville, KY: Westminster John Knox. p9, p230.

¹⁸ Kevin J. Vanhoozer (2005) *The Drama of Doctrine: A Canonical-Linguistic Approach to Christian Theology*. Louisville, KY: Westminster John Knox Press. pp. 37–38; cf. 46–48, 65–66.

¹⁹ P110

²⁰ Kevin J. Vanhoozer (2014). *Faith Speaking Understanding: Performing the Drama of Doctrine*. Louisville, KY: Westminster John Knox. p9, p237

Gratitude as Practice and Discussion

To this end, I invited seventeen Mongolian Bible college students, enrolled in my class, “Education and Spiritual Formation,” to practice gratitude.

They were required to study and implement gratitude practices throughout one semester. During the first three class sessions, I lectured on a study of the benefit of gratitude, exposed the students to literature on gratitude, and instructed them to practice gratitude through writing a gratitude journal entry each day. They were also asked to write thankyou letters of approximately 350 words that expressed specific thanks to a close person whom they never appropriately thanked before.²¹ Every other week students were invited to share the insights they gained through these gratitude practices. On the last day of the course, the students shared their final reflection papers, in which they were asked to examine any changes in their inward attitude and transformational experience as a result of practicing gratitude.

As a result of this course and assignment, students reported significant psychological and spiritual healing. They also experienced healing of broken relationships with family members, as well as greater satisfaction in their emotional and spiritual lives. Furthermore, the majority of students had a stronger positive attitude and stronger engagement in my class. The overriding premise of this paper is that practicing gratitude as a part of Christian education pedagogy can foster wholistic transformation in both the individual and in the larger faith community. Hopefully, my research will positively impact theological education.

Froh, Miller and Snyder²² point out that gratitude does not come effortlessly; rather, it is a learned process that requires effort and a certain level of self-examination and reflection. Likewise, Watkins, Uher, and Pichinevskiy²³ discovered that as the participants count blessings daily, they are training their brain with cognitive habits to magnify the blessings in their lives.

In light of this, this section discusses how gratitude needs to be intentionally practiced and cultivated. My research also includes the testimonies of students’ transformation in the inner attitudes and their insights on practicing gratitude. All names have been altered to keep confidentiality.

As most of my students reflected upon their experience of practicing gratitude, they confessed that they initially did not feel at ease in writing a gratitude journal. For example, Tuochi wrote,

“I was quite upset when my professor asked me to write a gratitude journal. If I look at my life and the situation I am in, I have nothing to be thankful. It makes me feel more miserable and hopeless. I force myself writing gratitude journal because it was a part of my class’s assignment. Considering my journal book as a garbage can, I started to pour out all my frustration and anger on my journal. After expressing all my filthy emotions, I felt more connected and more in the present. These days I started to count blessings from

²¹ Research indicates that writing and receiving gratitude letters can increase joy for both the writer and the receiver (Emmons, 2007; see Greater Good Science Center, focus: gratitude).

²² Froh, J. J., Miller, D. N., & Snyder, S. F. (2007). Gratitude in children and adolescents: Development, assessment, and school-based intervention. In *School Psychology Forum*.

²³ Watkins, P. C., Uher, J., & Pichinevskiy, S. (2014). Grateful recounting enhances subjective well-being: The importance of grateful processing. *The Journal of Positive Psychology*, 1-8.

God and people and felt grateful and peaceful. Writing a gratitude journal has been a time for arranging my complicated and messed up life in order. As I wrote the gratitude journal consistently for three months, I started to face my reality with confidence, instead of avoiding it. I also developed a habit to plan the next day every night and started to have a very sound sleep. When I got up in the morning, I felt very refreshed and had great quiet time and prayer time. Writing gratitude journal is miracle medicine for me. I am now truly thankful for my professor who gave us the assignment of writing gratitude.”

As a result of writing the gratitude journal, Tuochi gained more physical energy, regular sleep, and a healthier lifestyle.

Another student, Miga, also expressed the changes he saw in himself as he intentionally practiced gratitude. Miga responded in his reflection, “My life has been very boring recently. When I was assigned to write the gratitude journal, it gave me the time to stop and count blessings, savor those blessings. I realized that I was horribly unthankful person before God. The more I was thankful, the more things I felt thankful for a day.” As he practiced gratitude, he experienced a greater connection with God, as well as more peace and contentment in his heart.

Munghu expressed the benefit of intentionally practicing gratitude, “Practicing gratitude is an awesome discipline. It was not easy in the beginning. I think that over three months of writing gratitude journal develops my habit of being thankful in my brain. As I make conscious decisions to be thankful every moment, I noticed that I feel much more optimistic, joyful, energetic, and of course happier than ever before.” Munghu testified that she gained ripples of joy and happiness as a result of developing the habit of gratitude.

Gala echoed a similar experience, “When I have money, I give thanks and when I did not have money I also give thanks. When I gave thanks for the things that I used to view negatively, the great things happened in my life. Instead of complaining about my finance, I started to thank God that at least God gave me a healthy body (Normally I was grumpy and complained about shortage of money in my life). A couple of weeks ago, we were about to leave for a mission trip. I really wished that I have sunglasses. Right before the trip, one of my classmates told me that her sunglasses did not fit her well, so she wanted to give them to me. I strongly felt that since I started to thank for everything good or bad in my life, so many good things happened in my life and I see many more thing to be thankful for – more than I could count! I felt good about myself and happy and at peace with myself and other people²⁴. Even some people told me that I got prettier and slimmer.”

I remember that Gala received a full scholarship at the end of the semester²⁵. She looked much more attentive and focused in my class. She showed eagerness to learn and very engaged in the class discussion. Amazingly, not only Gala but also the rest of the class seemed to be more positive and engaged in sharing and learning. According to the educational research, grateful people are more attentive, alert, creative in problem-solving, and display improvement in their learning.

During that semester, I observed that the learning faith community was turned into a circle of thanksgiving to God. Another finding of my research is that the power of gratitude can

²⁴ Gala wrote on her previous reflection paper that she thought about herself that she was ugly, fat and worthless.

²⁵ Gala got all A's on her report card.

foster positive transformation and promote engaged environments and reinforced relationships between the students and for both teacher and students. The discipline of gratitude is the explicit effort to recognize that all we are and have is given to the faith community as a gift of love, a gift to be celebrated with joy. Here ripples of gratitude were observed as positive flow-on effects in their classrooms.

Munghung's story

Recently, Dr. Robert Emmons (2014), a leading scholar in the scientific research of gratitude, concluded the gratitude study at the Gratitude Summit, "Gratitude has the power to heal, energize, and transform lives²⁶." His study argued that cultivating a spirit of gratitude enhanced the well-being of the whole person.

My research concurs with his proposition. After three months of incorporating gratitude practices, my students were asked to self-identify how they became engaged in gratitude practices, the effects of these practices, and challenges of implementing these practices.

As my students practiced gratitude through writing the gratitude journal and writing thank-you letters, they demonstrated that the quality of their lives became substantially, psychologically, spiritually, physically, and cognitively better, along with relationships that were strengthened.

One of the outstanding examples of my research is Munghung's amazing transformation. On the first day of my class, I met Munghung whose head was completely down and she was barely holding her body up. At that time, I was very curious and wondered why she was in my class and not in the hospital. As weeks passed by, I noticed that she seemed to smile more and looked healthier and happier. Later I heard from other students that she was suffering from a terminal disease. Her reason for coming to school was to get to know Jesus before she died and made sure she would go to heaven.

The following is her testimony on her final reflections.

"We all suffer from pain but the pain that I went through was barely unbearable. I had many emotional scars, which caused me to complain and criticize other people. I had no confidence in myself. I believed that God knew my problem and He sent me to Professor Grace's class so that I could be healed. When I was young, my grandmother raised me. When I just turned to 9 years old, my grandmother passed away, so I moved back to my parent's house. My parents had horrible relationship, yelling and fight with each other every single day. My parents completely ignored me and never showed me their affection. It made me long for my grandmother's love more. I've got sick more and more due to stress. After I had been diagnosed with the terminal disease, I decided to attend Seminary hoping that I would know God better before I die. During the first semester of my school, the professor assigned us to write thankyou journal every day. At first, it was hard to write because I had nothing to be thankful for. So I started to thank God for whatever I could find. I gave thanks for the opportunity to take classes at the Bible college. Then I thank that I can breathe and am still alive. I wrote the journal every

²⁶ Emmons, R. A. (2014, June). *Why does gratitude matter?* Paper presented at the Greater Good Gratitude Summit, Richmond, CA.

night for 10 to 15 minutes. Every week I wrote more things to be thankful for. Even though I was literally abandoned and abuse by my parents physically and emotionally, I began JUST to thank my parents. I also thanked my husband who is not a good provider, instead of yelling at him. Although my body was in great pain all the time, I thanked God for my body and life.”

Even though she felt deeply hurt, resentful, and bitter, Munghung decided to choose gratitude, instead of complaints. She disciplined herself to make the deliberate choice to fill her heart with gratitude in words or actions to her close ones. Moreover, she started to experience emotional and spiritual healing.

“About a month later, I noticed somewhat slow changes in my life. My view of my parents had always been very negative. However, strangely after starting to express thanks to them in words and actions, I felt that they cared for me. I also noticed that my parents were doing many things for me. My attitude toward my husband also got changed. I used to criticize him all the time but now I have great love for him and even respect him for all his hard work for me. I sensed slowly I was being healed. I was not afraid of things that once haunted me. Instead, I gave thanks for everything in my life. I even noticed that people around me started to show more positive and welcoming attitude toward me and even gave me special favors. This is a really miracle.”

Practicing gratitude was her active and conscious choice and training for her well-being. Here she experienced a dynamic interchange of giving and receiving a thanksgiving gift. As a result, she experienced emotional healing and developed healthier relationships. Gratitude was not a thought or emotion. Rather it is an inner attitude and strength, which can be recognized as the opposite of resentment or complaint.²⁷ Her amazing healing is not just emotional but also physical. She got completely healed from her terminal disease and now she became an assistant pastor at a local Mongolian church.

My study shows that my students experienced tremendous psychological and spiritual healing, in addition to recovering broken relationships among the family members and achieving greater satisfaction in their emotional and spiritual lives. Overall, the majority of students seemed to improve their attention span and have more positive attitude and strong engagement in my class. The overriding premise of this paper is that practicing gratitude as Christian education pedagogy can foster wholistic transformation not just in individuals and but also the larger faith community.

The Grateful Brain: What does a grateful brain look like?

Positive psychologists have published some interesting findings related to the effects of gratitude. For instance, a gratitude visit reduced depressive symptoms by 35% for several weeks; and a gratitude journal helped people to lower depressive symptoms by 30% as long as the practice was continued. Furthermore, National Institutes of Health (NIH) inspected blood flow in several brain regions while participants mustered up feelings of gratitude²⁸. They discovered that the more grateful the subjects were, the higher levels of activity they experienced in their

²⁷ Howells, 2007, p. 12

²⁸The Grateful Brain | Psychology Today. (n.d.). Retrieved from <https://www.psychologytoday.com/blog/prefrontal-nudity/201211/the-grateful-brain>

hypothalamus. This increased activity of hypothalamus has made wide-ranging impacts such as increased exercise, decreased depression, better sleep, and fewer aches and pains. It also helped to control better metabolism and stress levels. These results on brain activity also demonstrated that levels of gratitude positively influenced general vitality and energy²⁹.

Furthermore, the emotional state of gratitude directly galvanized brain regions associated with the neurotransmitter dopamine. This Dopamine is commonly called the “reward” neurotransmitter because it instigates people to initiate action, as dopamine increases in our body. As dopamine reinforces our ability to see things for which to be grateful, our brain actively searches for those things that stimulate feelings of gratitude. That is how the virtuous cycle is created. Even a brain-scanning study in *NeuroImage* reveals that a simple gratitude writing task helps people to experience many psychological benefits³⁰.

The emerging science demonstrates that feelings of gratitude produce a direct and powerful impact on our physical and spiritual well-being because they engage our brain in a virtuous cycle. Indiana University researchers, led by Prathik Kini, researched 43 people who were going through treatment for anxiety or depression. Twenty-two were assigned to a gratitude intervention during their 60 minutes counseling such as writing a gratitude letter to their recipients for the first 20 minutes. The other participants acted as a control group and attended their counseling sessions as usual without the gratitude task. As the first group started seeing things to be grateful for, their brain searched for more things to be grateful for. The outcome of the research advocates that the more you practice gratitude, the more your brain adapts to the mindset of gratitude. As times passed by, they started to develop gratitude “muscle” in their brain that can be exercised and strengthened³¹.

In this sense, gratitude can be an upward spiral. As they practice choosing grateful thoughts over stress and discord, their brains calm their parasympathetic nervous system. Repeated thanksgiving tasks change their pattern of behavior, emotion, thought, and can eventually alter their physical brain. We call it neuroplasticity which is the aptitude of our brain to change form and function with our repeated thoughts instigated by cellular reactions in our body whether they are to our benefit or not. This is why gratitude practice can have such a powerful effect on our life. God has called us to engage our brain in a virtuous cycle³².

As described above, as Mongolian students exercised their gratitude brain muscles through writing a gratitude journal, the virtuous cycle in their brain developed. Since they could not change their environments or the miserable situations they faced, they instead consciously chose to respond to their life situations with a thankful heart and a positive perspective. This differed from the way in which they previously reacted to the same situations. When my Mongolian students decided either in action or imagination³³ to be thankful in all circumstances, their new neural circuits start to run. As they gave up anger, bitterness, resentment, and unforgiveness, neurologically they actively stopped firing unhealthy neural circuits. At the same

²⁹ Ibid.

³⁰ Ibid.

³¹ How Expressing Gratitude Might Change Your Brain. (n.d.). Retrieved from http://www.huffingtonpost.com/science-of-us/how-expressing-gratitude_b_8984510.h

³² As we look for things to be grateful for, our brain searches for more things to be grateful for. That is how the virtuous cycle becomes fashioned.

³³ Our brain does not differentiate between visualizing something and a real event. So just visualizing something or thinking about it can change our neural circuits.

time, their neurological “heart,” (ACC)³⁴ got activated, reinforced and retained. It is because the ACC is “the processing points between our judgment (DLPFC³⁵ and OFC/VMPC³⁶) and our emotions (limbic system). Ultimately, it is in the ACC that our choices are made³⁷.” When the ACC of Mongolian students started to be thankful, healthy neural circuits grew stronger, the prefrontal cortex began to be recovered, love was inflamed, and fear was impaired. Ultimately, holding to the truth about God continually helped them to restore God’s image within us. When they received the truth and exercised the God of love, the PFC-including the ACC got healthier, and fear was overcome. Eventually, their unhealthy thought patterns started to melt down, and they began to be transformed into Christ’s likeness.

This is why our thoughts cause lasting, physical changes in our brain and eventually alter our life mentioned in Proverbs 23:7³⁸. Apostle Paul puts emphasis on the importance of giving thanks in all circumstances in 1 Theologians 5:16-18, “Rejoice always, pray continually, give thanks in all circumstances for this is God’s will for you in Christ Jesus.” Paul knew that if we continue to rejoice always, pray continually, give thanks in all circumstances; those healthy circuits grow stronger, and our characters will be like Jesus Christ. It is why we bring every thought into captivity to Jesus.

Give Gratitude from the Heart

The most common anthropological term, "Heart" (Hebrew *lebab/leb* [b'bel], Gk. *kardia* [kardiva]) is mentioned over one thousand times in the Scripture. Ancient people believe that it represents a person's center as a central organ and has emotional-intellectual-moral functions. However, moderns have associated some of the heart's emotional-intellectual-moral activities only with the brain and glands.

Recently, neuroscientists have discovered intriguing evidence about the heart. The heart does not simply pump blood. It has its own independent nervous system referred to as “the heart’s brain³⁹.” This heart-brain consists of an intricate network of neurons, neurotransmitters, proteins and support cells. Its elaborate circuitry allows it to function independently of the cranial brain⁴⁰ to learn, remember, and even sense⁴¹.

According to the research of Heart Math Institute, the brain operates in a linear, logical manner. However, heart intelligence provides us with an intuitive awareness that extends beyond linear, logical thinking. As a result, when we use our heart, our perspective and decisions can become more flexible, creative, and intuitive⁴².

³⁴ The anterior cingulate cortex is the part of the brain between your eyes and slightly back from your forehead. This brain region helps people to experience compassion, love, and empathy and furthermore to choose right from wrong.

³⁵ The Dorsolateral Prefrontal Cortex is where we reason, strategize and plan.

³⁶ Orbital frontal Cortex and the ventral medial prefrontal cortex is where we experience the conviction of guilt and recognize socially inappropriate behavior.

³⁷ L. Peoples, “Will, Anterior Cingulate Cortex, and Addiction,” *Science* 296 (May 31, 2002):1623.

³⁸ “For as he thinks in his heart, so is he.”

³⁹ Dr. J. Andrew Armour first introduced heart brain 1991.

⁴⁰ **Cranial nerves** sometimes are called **cerebral nerves** which emerge directly from the brain and the brainstem.

⁴¹ Let Your Heart Talk To Your Brain | Care2 Healthy Living. (n.d.). Retrieved from <http://www.care2.com/greenliving/let-your-heart-talk-to-your-brain-2.html>

⁴² The research of The Heart Math Institute

Recent research concurs with the Hebrew definition of the heart. The Bible strongly argues that the heart be the core of not only our spiritual activity but also all the operations of human life. The heart is the seat of the conscience (Romans 2:15) and has intellectual-spiritual faculties. For instance, the heart thinks (Matt 9:4; Mark 2:8), remembers, reflects, and meditates (Psalm 77:5-6; Luke 2:19). Sometimes, the heart represents the man himself and is considered to be the seat of the emotions, passions, and appetites (Genesis 18:5; Leviticus 19:17; Psalms 104:15)

Both the Bible and science affirm that the heart is a primary source of our emotions and actions. This is a new paradigm for understanding our emotions, according to the discovery called “heart intelligence.” The solid scientific tie between heart and emotion proves that positive emotions like gratitude and appreciation set our heart rhythms into a more stable, coherent pattern. Negative emotions like anger and frustration, on the other hand, cause the heart to beat with an erratic, disordered rhythm. This occurs because toxic hormones flow, and our brain is put into an alert state (fight or flight). These data prove how different emotional states can set the heart-rate into a variable pattern⁴³.

According to recent scientific research, the heart communicates with the brain and the rest of the body and delivers extensive emotional and intuitive signals to our brain in three ways: neurologically (through transmissions of nerve impulses), biochemically (through hormones and neurotransmitters), and biophysically (through pressure waves)⁴⁴.

The increasing scientific indication posits a fourth way of communication— energetically (through electromagnetic field interactions). This evidence suggests that our hearts may essentially be the "intelligent force" behind the intuitive thoughts and feelings we all experience. The Heart Math Institute discovered that the heart emits an electromagnetic field exactly like the brain. The electromagnetic field of the heart extends several feet from our bodies and is about 60 times stronger than the electromagnetic energy emitted by the brain⁴⁵.

This electromagnetic field is conveyed as either negative or positive emotional energy. In this sense, our emotional state affects not only us personally but those around us. In fact, there’s good evidence that your particular heart-rate rhythm can be reflected in the heart-rate rhythms of those around you. So when we sense that he or she is in a good mood, most likely we are reading and feeling the electromagnetic field emitted by the other person. This is why those who are in tune with their hearts may have the capacity to know and sense this energy and even read the mood of other people.

Through these biological communication systems, the heart has a significant influence on the function of our whole body. The research of the Heart Math Institute reflects this aspect of the teaching of Scripture. Our face and body exhibit either negative or positive emotions: “A happy heart makes the face cheerful, but heartache crushes the spirit” (Prov. 15:13); “a cheerful

⁴³ Give Gratitude from the Heart. Your Brain Will Thank You ... (n.d.). Retrieved from <http://thebhaktibeat.com/give-gratitude-from-the-heart-your-brain-will-thank-you>

⁴⁴ Let Your Heart Talk To Your Brain | Care2 Healthy Living. (n.d.). Retrieved from <http://www.care2.com/greenliving/let-your-heart-talk-to-your-brain-2.html>

⁴⁵ Give Gratitude from the Heart. Your Brain Will Thank You ... (n.d.). Retrieved from <http://thebhaktibeat.com/give-gratitude-from-the-heart-your-brain-will-thank-you>

heart is good medicine, but a crushed spirit dries up the bones” (17:22). The emotional state of the heart affects the whole person.

Gratitude might be one of the most effective ways to feel that “warm-glow’ feeling. Gregg Braden, an author and activist who draws on science to explain spiritual phenomena, demonstrated a test on some volunteers. According to his test, the simple act of feeling thankful is the most reliable way to bring our heart rate into a “coherent” rhythm⁴⁶.

The more we are in tune with our heart (spirit) in which the Holy Spirit resides, the more we will have balanced, coherent emotions and characters’ and the less likely we will be to experience physical, emotional, and spiritual sickness and disease.

As proven by the ever growing scientific research on heart intelligence, it may be time for us to renew our mind and develop a new heart for Jesus and rethink about how we can best follow our hearts in which dwells the Holy Spirit. Teaching people to practice gratitude from the heart and the brain can be a pathway to become more involved in the heart of God. This new research on the heart and brain should encourage Christian educators to incorporate its effect on gratitude as an imaginal educational entry point in our discipline.

Appendix: Ways to Practice Gratitude

A lifestyle of thanksgiving is a spiritual practice that gains momentum over time and grows with practice. Gratitude is rewarding and contagious.

The following suggestions are ways to help you develop a spiritual discipline of practicing gratitude and experiencing its wholesome effects in your life:

1. Make a Vow to Practice Gratitude: Commit yourself to cultivating a grateful attitude

Write your gratitude and post it somewhere where you will be reminded of it every day. Research indicates that making an oath increases the probability that the action will be executed.

2. Every morning focus on God’s loving kindness and grace

Begin each day by worshipping God and acknowledging His goodness and love for you. Expect to see God at work during the day – then watch for it! The psalmist gives us many examples to follow. You can utilize spiritual songs (Ephesians 5:18, 20) too.

⁴⁶ Ibid.

3. Train your eyes to see God’s goodness even in “small” blessings and take note of them throughout the day (health, nature, and relationships)

Think Outside the Box. Creatively look for new, small blessings from God and circumstances in which to feel grateful. Make the most of the opportunities to flex your gratitude muscles.

4. Feel it through our five senses—the ability to touch, see, smell, taste, and hear

Cultivate the appreciation of your capacity to touch, see, smell, taste, and hear. Put your hands on your heart and feel gratitude in your heart, let it percolate through every cell in your body. Move into the feeling of gratitude.

5. Set aside time for writing Gratitude Journal on a daily basis

On a day-to-day basis set the time to recapture moments of gratitude related to regular events, your personal attributes, or valued people in your life.

6. Practice present-moment gratitude

Throughout your day, pause now and then to sense the presence and grace of God that surrounds you in the moment. Add those gracious gifts from God to your gratitude list as they come to mind.

7. Cultivate your "gratitude" vocabulary

In gratitude, focus on the inherently good things that others have done on your behalf rather than on how inherently good you are.

8. Share the gratitude

Partner with someone in a covenantal relationship to keep each other accountable. Write a Thank You Note in an old-fashioned way.

9. Allow yourself to be human before Prayers of Gratitude

You can grumble with an audible voice about anything to God. It might get mixed up in your prayers of petition, but let God sensitize you to your internal complaint. The Psalmist frequently complained to God You could too.

10. Use Visual Reminders of Gratitude

Visual reminders can serve as cues to prompt thoughts of gratitude since our human tendency is to be forgetful and lack mindful awareness. So hang up signs or Bible verses on your walls, at your desk, and in your car.

11. Learn Prayers of Gratitude

In many spiritual traditions, including Christianity, prayers of gratitude can be the most powerful and effective form of prayer. Through these prayers, we acknowledge that the ultimate source of

all goodness is God. Gratitude puts everything into perspective; it enables us to see God's many blessings all around us.