RETHINKING THEOLOGICAL ANTHROPOLOGY:

CONSTRUCTING A PASTORAL THEOLOGY OF WELLNESS IN LIGHT OF THE PARADIGM

OF PLASTICITY IN NEUROSCIENCE

by

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To

Stacey, Naomi, and Leilani Roozeboom

With love.

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ABSTRACT

This dissertation explores theological anthropology through an interdisciplinary, critical-correlational conversation using a qualitative approach. In so doing, it asks how new lenses and layers of human identity and relationality might shape one's sense of self, sense of relationality, care of self, and capacity to care for others. Furthermore, it argues that one's capacity for empathy, compassion, and connection in (inter)relationships is directly tied to one's own attunement and connection with the various aspects of one's embodied self – (intra)relationship. However, often times pastors/pastoral caregivers do not recognize, listen to, nor care for one's whole (intra/inter-relational) self and negate the relationality with oneself and with others.

Additionally, this study examines neuroplasticity within the embodied brain ecosystem and one's performative ability to "story" oneself holistically through the use of practices of wellness – attunement, nourishment, movement, rest and renewal, and relationships – as an intentional use of motor learning, motor training, and procedural memory. The research suggests that such practices have the potential to impact one's sense of self, relationality with others and God, and one's ability to care for others – and may induce neuroplasticity.

Ultimately, this project presents four organizing categories, or constellation of lenses, for rethinking the human person consisting of: (1) multilayered, embodied ontology, (2) intra/inter-connected relationality, (3) performative and transformative capacity, and (4) prophetic teleology each of which mutually inform and reform one another in ongoing, dynamic ways. Taken together, this understanding challenges pastoral theologians and caregivers to ask how we might continue to develop our capacity to image Christ and provide care as we strive to love God, love our neighbor, and love ourselves in all our particularities.

CHAPTER ONE: RETHINKING THEOLOGICAL ANTHROPOLOGY – NEW NEUROSCIENTIFIC LENSES AND LAYERS

Who/What are we [human persons] that you are mindful of us? (Psalm 8:5)

Postmodern constructions of theological anthropology informed by neuroscience reveal (or perhaps remind us of) the intra/inter-relationality of human persons and how the capacity to care for the other directly ties to one's own self-care. Neuroscience illustrates how physiological embodiment is a central piece in this construction and, though often overlooked, we now realize that everything about us – our thoughts, memories, emotions, language, learning, relationships, and spiritualities – is mediated via the "embodied brain ecosystem." In using this term, "embodied brain ecosystem,"[1] I highlight that the brain functions like a complex and dynamic system rather than a personal computer with direct causal relationships. Input does not always lead to predictable or predetermined output. Rather, the brain is largely composed of maps, neural networks, and vast communication systems of perception, sensation, attention, cognition, consciousness, functionality (memory, movement, emotion, language, and relationality), and identity constructions (Ratey, 2001). As such, the brain works with whole concepts and whole images, examining them for similarities, differences, or relationships between them (Ratey, 2001). Moreover, in using this term, I highlight that the brain is literally located throughout the body via the central and peripheral nervous systems; therefore, all of the brain's functions are

[1] This term is an expansion of psychiatrist, John Ratey's (Harvard School of Medicine), argument for the neuroscience community to revise its understandings of the brain. Ratey writes, "The sooner we replace our mechanistic model of the brain with an ecologically centered, systems-based view, the better off we will be, for such a model better accounts for much of human experience (Ratey, 2001, p. 4)

mediated via our bodies. In other words, we perceive, think, feel, and construct meaning, as well as know ourselves, others, and God as, and only as, embodied beings.

In light of this, I propose a theory of "wellness" that embraces one's whole (embodied) being and utilizes regular practices of self-care in attunement, nourishment, movement, rest and renewal, and relationships as a form of intentional neuroplasticity. Neuroplasticity describes how every thought, every action, and every experience in one's life alters the brain's architecture and function; thus, impacting one's sense of self and one's relation to the world. Consequently, neuroscience offers a correction and expansion of our theories and practices of pastoral caregiving and offers exciting possibilities for rethinking and re-theologizing our understandings of: (1) what it means to be human persons, (2) how persons experience and make meaning holistically, (3) how the care of the other is directly tied to the care of self, and (4) how we might best go about providing pastoral care and counseling as, and for, the intra/inter-connected person.

In this study, I asked pastors and pastoral caregivers to engage questions of identity and relationality as they participated in and reflected on a pastoral wellness program. The program was based on a pastoral theological interdisciplinary conversation with neuroscience and proposed a holistic, embodied model of "wellness."[2] The model of wellness I proposed to them consisted of five areas and regular practices self-care within each area. The five areas of wellness include: (1) Attunement, (2) Nourishment, (3) Movement, (4) Rest and Renewal, and (5) Relationships. I will examine this theory of wellness and each of the areas in much more detail in later chapters, but for now want to highlight some of the ways the participants engaged the question of theological anthropology and wellness.

[2] I will explain why I use this term to describe my theory in a later section below and throughout this dissertation.

One participant in particular – Rev. Michelle Kim[3] – stands out as she reflected on how her sense of identity changed as a result of this study. Rev. Kim shared:

> One area that is different for me [following the wellness program] is an acknowledgement – and this may seem kinda silly – an acknowledgement that every day I need to have at least one healthy meal. I tend not to think about that consciously, it either happens or it doesn't happen, but I don't fret about it one way or another. And so this brought an attention to that. I actually wrote that in my covenant this year – we do annual covenants and we just went through that process on Sunday – I found myself putting it my covenant, "I pledge to God and this community to eat one healthy meal a day." And that's a direct result of this.

Rev. Kim stated that acknowledging the importance of her embodiment and the role that nourishment plays was "kinda silly." However, I believe what she and the other participants discovered was the vital importance of one's entire being in health and wellness, and particularly in being able to provide adequate care for others. Furthermore, she reflected that "the data [from her weekly wellness logs] supports an integration of all areas; all those areas of life into a person of wholeness…it takes all of them." Rev. Kim appears to have developed a new, holistic, embodied, and intra/inter-connected understanding of her identity. She was not alone.

Another participant named the importance of movement and physical activity in his sense of self. He reflected:

> I feel the best when I make sure I've added some kind of movement or physical things to me. This doesn't mean I should neglect the rest, but after I've done some good physical things and good nutritional things, you really feel good about yourself.

And another participant named how rest and renewal in self-care was vital to her ability to care for others. As she reflected on wellness she stated:

[3] All participant names are pseudonyms and all identifying information has been changed to honor the anonymity of the participants in this study.

> I'm gonna try to work harder to get some more rest because I do a better job when I'm rested, and I have a better attitude and am better able to handle stress when I'm rested.

Each of these examples illustrates an important, but often overlooked quality of human life – the physiological embodiment of persons. And if one's physiological embodiment is so vital and central to living well, then our caregiving must address this quality of human life as well. In other words, our caregiving must have the lexicon and capacity to care for the whole person. And this capacity flows directly out of one's ability to care for his or her "self" (Harrison, 1981; Ratey, 2008; Siegel, 2010). More specifically, there is an ethical imperative of neighbor love (Ramsay, 1998) and relational justice (Graham, 1995) that is served and strengthened through understanding the complex "embodied brain ecosystem" of intra/inter-relationality in human persons. As I will demonstrate, one's capacity for empathy, compassion, and connection in (inter)relationships is tied to one's own attunement and connection with the various aspects of one's embodied self – (intra)relationship. In other words, this project seeks to provide new ways of understanding the intra/inter-relationality of the "I-in-relationship" to which persons bring into the encounter with the Other – particularly in the pastoral caregiving relationship.

Learning from/with Neuroscience: Embodiment[4] as Normative

Neuroscience is one of the leading voices in reconstructing a holistic, embodied understanding of the human person in the postmodern era. After all, the brain, while not limited to its

[4] In presenting a pastoral theology of wellness, I chose to focus on the embodied quality of the brain ecosystem, paying particular attention to the structure and functionality of the flow of energy and information within the brain and highlight how intra-relationality with self impacts inter-relationality with others, as well as provides an impetus for addressing social justice issues. Consequently, this research is a step in engaging questions of embodiment and neuroscience from a pastoral theological perspective, yet more work is needed as we continue this interdisciplinary dialogue.

physiological and electro-chemical processes is part of one's physical embodiment. Neuroscience, among other insights within postmodern scholarship, has deconstructed the Cartesian dualism of separating mind/soul and body, which has tended to impact our constructions of theological anthropology, as well as our theories and practices of pastoral care and counseling, and reconstructed a more dynamic, complex, and systemic understanding of human persons. Ironically, this movement to a more "primitive" understanding of what human experience entails; namely an embodied, holistic construction of life and identity is more accurate and sophisticated than the previous dualisms led to believe.[5] No longer is it realistic nor possible to compartmentalize the various aspects of human embodiment; rather, we now realize the complexity and interdependence of them – each informing, forming, and reforming the others in an ongoing and dynamic process of construction. Therefore, self-identity and meaning are constructed via one's embodiment. In other words, one "stories" oneself intellectually *and physiologically*. I will unpack what this means for pastoral theology, care, and counseling throughout this study, but for now simply want to highlight the movement towards embodied, holistic understandings of human identity.

The movement toward embodiment is in large part due to the emergence of neuroscience as a leading voice in the construction of mental health and well-being in the last twenty years. In fact, the decade of the 1990s was coined "the decade of the brain" by the United States Congress

[5] This re-emergence of physiology is what I am calling a "physiological re/turn" in the fields of mental health. Various fields such as anthropology, ethnography, cultural theory, psychiatry, psychology, and now pastoral theology are moving in a direction of physiology, and name the importance of our physical embodiment as a vital source of human knowledge, experience, and identity. A text edited by Thomas J. Csordas, *Embodiment and Experience: the existential ground of culture and self*, (Cambridge, 1994), explores embodiment in more depth than this current project can. Csordas names this renewed interest in embodiment a "turn to the body in the intellectual history of contemporary scholarship," and that a central concept of embodiment in the postmodern milieu is that of "existential indeterminacy." By this term he implies that embodiment is not reducible to representations of the body, to the body as an objectification of power, to the body as a physical entity or biological organism, or to the body as an inalienable center of individual consciousness, but is something more dynamic and complex (p. xi).

(Howard, 2006). Neuroscience offers an expansion of our theories and practices of pastoral caregiving by providing new lenses and new layers of understanding of identity and relationality. Nevertheless, pastoral theologians have often overlooked or neglected this very significant research, which will limit our ability to care for others and ourselves in the years to come.[6] Consequently, it is vital that pastoral theologians engage the neuroscientific discourse as a key conversation partner in our constructions of theological anthropology and theories of care and counseling.

Therefore, my central focus in this project is to discern how postmodern constructions of theological anthropology informed by neuroscience reveal the intra/inter-relationality of human persons and how the capacity to care for the other is tied to one's own self-care (Harrison, 1981; Ratey, 2008; Siegel, 2010). Moreover, a neuro-theo-logical lens also reveals how important our physical embodiment is in everything about us – particularly our spiritualities, relationships, and self identities. In other words, how we construct and continually reconstruct our identities and lives is the product of a holistic interconnected and dynamic flow of information within our embodied brain ecosystem. As we experience, reflect on and make sense of that experience cognitively, linguistically, bodily, and relationally, our brains literally grow new neurons and neural connections, providing greater capacity and ability for connection and dynamic integration as we learn to embrace and listen to our whole experience(s). In short, I am highlighting how human beings also make sense out of their experience and construct meaning and identity holistically.

[6] Professor of pastoral theology and counseling at the Divinity School at Vanderbilt University, Bonnie Millier-McLemore, also named this in her paper at the annual meeting of the Society of Pastoral Theology conference in June, 2010. She commented, "pastoral theologians have been remiss in our neglect of this research, hunkered down with our old favorites (psychoanalytic, family systems, narrative therapy, etc.), while psychologists across campus have moved on to new theories" (unpublished SPT address lecture, June 2010).

A sub-field within neuroscience, interpersonal neurobiology, also reveals physiological "evidence" that we are literally inter-connected with one another via our brain functions (mirror neurons). The more attuned we are to our own internal world, the more aware, receptive, and able to connect with others we become (Siegel, 2010). In other words, there is neurological evidence for a direct connection between care of self and care for others. Neuroscientist, Andrew Newberg, has studied and written at the University of Pennsylvania about the brain activity in "religious experience." He has been studying brain activity in persons who meditate intensively and regularly (Tibetan Buddhist monks, Franciscan nuns, and Sikhs) to explore what occurs in the brain during these activities. As expected, the frontal lobes, the part of the brain responsible for focused attention, lit up in the brains of those meditating; however, what fascinated Newberg was the areas of the brain which give persons a sense of themselves in time and space, the parietal lobes, went dark during meditation. Newberg suggests this means that a person in a meditative state is thought to lose one's sense of his or her separate self and feel a sense of oneness with others. Newberg calls this sense of oneness "absolute unitary being" (d'Aquili & Newberg, 1999; Hogue, 2010). Newberg's research suggests that persons who meditate regularly are actually reshaping and rewiring their brains to be more aware and interested in one's inter-connectedness, thus providing themselves more compassion and empathy, as well as more ability to engage others in loving and life-giving ways with others. In Christian theological terms, those who meditate regularly are teaching themselves greater capacity to love their neighbors as themselves.

Neuroscience refers to the aforementioned processes as *neuroplasticity*, *neurogenesis*, and *mirror neurons* within *interpersonal neurobiology*. I will explain these concepts in more depth in a later chapter, but for now I want to highlight the interplay of internal-external agentic

stimuli, or how we actively construct our neural networks. Harvard Medical School's Dr. John Ratey explains this as such:

> The brain is not a computer that simply executes genetically predetermined programs; nor is it a passive gray cabbage, victim to the environmental influences, we the owners – to the extent our genes allow it – can actively shape the way our brains develop throughout the course of our lives…Experiences, thoughts, actions, and emotions actually change the structure of our brains. By viewing our brains as a muscle that can be weakened or strengthened, we can exercise our ability to determine who we become. (Ratey, 2001, p. 17)

As a Christian pastoral theologian and caregiver, I see this process a bit differently. We do actively construct who we become, but theologically this process occurs in co-participation with the Spirit of God in our lives and our communities of faith. As we will discover, our embodied brain ecosystems are capable of amazing things, yet ultimately we are limited and finite, and thus transformation requires a partnership of our agency and the empowerment of God working together in concert. Therefore, I choose to use the term "co-participate" in the constructions of identity to name the reality of one's own agency collaborating with the Spirit of God.

Neuroscience also reveals that the flow of energy and information within our embodied experience is multidirectional, not unidirectional as previously thought. Therefore, I believe we should explore not only how our minds inform our bodies, but how our bodies, particularly how knowing and utilizing our physiology, re/constructs our brain, sense of self, and our sense of connectedness to others – all of which shape our theological anthropologies and theories of caregiving.[7]

[7] Shaun Gallager, author of the text, *How the Body Shapes the Mind*, (2005), captures the importance of embodiment well. He writes, "Human life and the beginnings of the intelligent behavior that we can see in the infant are not only measured by their physical manifestations as bodily processes, they *are* those processes, and are constituted by them. Movement and the registration of that movement in a developing proprioceptive system (that is, a system that registers its own self-movement) contributes to the self-organizing development of neuronal structures responsible not only for motor action, but for the way we come to be conscious of ourselves, to communicate with others, and to live in the surrounding world. Across the Cartesian divide, movement prefigures the lines of intentionality, gesture formulates the contours of social cognition and, in both the most general and most specific ways, embodiment shapes the mind" (p. 1).

WELLNESS: A CRITICALLY REFLECTIVE LOOK AT WHOLENESS

Based on neuroscientific insights, my research interviews, and the lived experiences of participants, I have constructed a working pastoral theology of "wellness" which I am proposing in this project. By "wellness" I mean that there is a particular quality that each person is called to embrace, embody, and enact via his or her holistic embodiment that shapes one's attunement with self (intra-relationality) and one's ability and capacity to engage the "other" in just relationships (inter-relationality). Wellness includes the following characteristics: holistic, embodied personhood, intra/interconnectedness, dynamic integration and complexity, ongoing sanctification, prophetic co-participation, and is facilitated through five key areas: (1) Attunement, (2) Nourishment, (3) Movement, (4) Rest and Renewal, and (5) Relationships. Additionally, I discovered through this research that wellness has a teleological aspect or sense of embracing one's calling in life for pastors and pastoral caregivers. I will unpack these concepts in depth in chapter five, *A Working Theory of Wellness*, but for now want to explain what I mean by the term "wellness" and why I consider it a critically reflective look at "wholeness."

Why Wellness?

I use the term "wellness" rather than the more popular term "wholeness" to describe health and well-being in persons' and communities' lives. I do this because, as will be demonstrated in this project, simple standard or normative understandings of health and wholeness are not adequate for the lived realities of many persons. Furthermore, they can, if taken uncritically, do damage to those who do not fit the standard definition. I believe using the term or metaphor of "wellness"

captures the complex and contextual construction of embodied human persons more than the more static concept "wholeness."

In using the term wellness, I want to illustrate how we often use the term "wholeness," but do not examine exactly what we mean by this term. Furthermore, I want to highlight two central aspects of my wellness model – creativity and contextuality. Critical theory has taught us that we cannot take assumptions for granted (Brookfield, 2005). Behind every "given" there is a vested "interest" somewhere. Thus, overly rigid and standardized models of health and wholeness while helpful as starting or reference points, cannot be thought of as exhaustive or all-encompassing. Therefore, I offer the following clarifications for how I use the concept of "wellness" in this project.

First, I believe that the notion of "holistic" or "wholeness" has become something of a vogue term of late and thus persons often use it uncritically or unreflectively. Many now say that we are whole beings, yet do not unpack what being whole actually entails. I believe there is an important quality to our wholeness, or way in which we embody and enact wholeness, which does not get named if we simply use the term "whole." For instance, acknowledging that I have a brain and a body as a part of being "whole" says nothing about how the body and brain are interconnected and communicate as a dynamic and complex system. Furthermore, it helps to clarify that there are some things that help facilitate my whole self being "well" (attunement with God, self and others, capacity for empathic encounters with others, regular exercise, ability to regulate and integrate the embodied brain communication system, and so on) and there are things that are less likely to facilitate my whole self being "well" (inability to connect and empathize with others, dis-integration and dis-regulation of my embodied brain, disconnectedness with my

bodily sensations, lack of exercise, and chaotic sleep patterns, etc.). The former does not guarantee "wellness" but does at least name some of the life-giving qualities of being whole.

Second, a wellness model of living and caregiving highlights and encourages notions and practices of *active*/*agentic* embodied self-care and self-construction in the ongoing pursuit of being well. In other words, it empowers persons to define and work towards wellness creatively and contextually, privileging their authorship as they story themselves (Epston & White, 1990). Each person is the author of his or her identity and meaning is constructed in the "storying process" – storying verbally and consciously (via the top-down approach of the cortex), yet also storying physiologically and unconsciously through movement and bodily experience (via the bottom-up approach of the limbic system and amygdala). In short, we are storying beings and our embodied brains are constantly constructing and reconstructing meaning and identity.

Third, a wellness model of pastoral theology and caregiving names the calling of "imaging Christ" in liberative, life-giving ways. It highlights the co-participatory activity necessary to embody and enact a prophetic Christlikeness in the world as persons and communities of faith partner with God "on earth as it is in heaven." In short, acknowledging our intra/inter-connectedness carries a *telos* with it.

Finally, a wellness model avoids the tendency towards linear notions of completeness and finality. Rather than being a precise destination, wellness is an ongoing reparative and preventive pursuit of living abundantly individually, communally, and globally. In theological terms we are already "whole" in Christ eschatologically, yet we and our world are not wholly "well." This understanding opens our awareness to finitude, limitation, and vulnerability in helpful ways. For instance, there is a certain measure of brokenness and dis-ease as part of living well. In light of this, we know that being "well" does not necessarily mean being without symptoms or

difficulties (Kornfeld, 1998). We know that chronic illness, disease, disability, and death are all parts of living well in this life. A (pastoral) theologically informed vision of wellness names a key distinctive of faith – one can be well even in the midst of limitation, brokenness, pain, and suffering. We might call this an eschatological hope of *already, not yet* as we strive to live well even while knowing it will only be partial.

PASTORAL WELLNESS PROGRAM

In order to provide participants a way to engage questions of identity, relationality, and wellness I supplied them a framework called the "pastoral wellness program." It consisted of five areas of wellness with suggested wellness practices under each area, but also encouraged participants to adapt and modify suggestions to fit their contextuality. The framework included:

1. **Attunement** – *with God, yourself, and others*
    - Spend 20-30 minutes in contemplative thought and prayer, utilizing rhythmic breathing and paying attention to your embodiment at least 3 days per week
    - The goal is simply to become mindful of your whole being (mind/brain/body/soul) and fostering the relationship with God and yourself
    - Reflect on what it means to be one created in the very "image of God" (Imago Dei)
    - Focused attention exercises: You might meditate on scripture, pray, journal or just sit in silence and listen to the spirit of God speak to you

2. **Nourishment** – *spiritual, emotional/psychological, and physical*
    - Each day pay attention to what you are nourishing yourself with
    - Eat healthy foods and an appropriate number of calories as defined by the CDC food guide pyramid
    - Drink 64 ounces of water daily and refrain from excessive carbonated or sweetened drinks
    - Nourish your mind with intellectually stimulating activities and experiences – novelty expands your brain's capacities and abilities – so start a new hobby, brush your teeth with your non-dominant hand, take a new route to work, learn a new skill, read something by someone who disagrees with your viewpoint

3. **Movement** – *actively participating in some form of physical activity or exercise*
   - Do something physically active for 45-60 minutes to move your body a minimum of 3 days a week
   - Cardiovascular exercise does tremendous things for the wirings/firings of your brain
   - Try to sustain your heart rate at a level where you can carry on a conversation. Please DO NOT OVER EXERT YOURSELF, pace yourself, and take it slow.

4. **Rest and Renewal** – *practicing "Sabbath" and taking time off*
   - Practice Sabbath taking each week
   - Take time away from the office to do something that renews your spirit and vitality
   - Sleep at least 8 hours per night most nights of the week

5. **Relationships** – *acknowledging and enacting our inter-relationality in life-giving ways*
   - Spend at least 1 hour each week with a friend or friends
   - Invite a friend for coffee or lunch
   - Ask a friend to join you in an activity you enjoy
   - Worship and pray with others at least once each week

Using the above framework as a guide, participants were asked to engage in and reflect on wellness and to keep a weekly log of the practices and activities they completed.

PASTORAL THEOLOGICAL PERSPECTIVE

This dissertation is shaped and guided by a pastoral theological perspective. What this means is that I take an approach or stance of *doing theology pastorally* rather than simply doing a theology *of* something (Burck & Hunter, 1990, pp. 871-872). In other words, I am not interested in simply applying theology to situations, but in the correlational process of bringing theology into conversation with lived experience and cognate disciplines in pastoral praxis – meaning the "ongoing process wherein knowledge leads from practice toward theory toward practice in an ongoing, spiral pattern" (Gorsuch, 2001, p. 15).

Theological reflection is another helpful framework to clarify a pastoral theological approach. In "Pastoral Theological Methodology," in the *Dictionary of Pastoral Care and*

Counseling (Hunter, 1990, pp. 862-864), Theodore Jennings names key distinctions between orders or types of theological reflection and classifies them into first order, second order, and third order theological reflection. First order reflection is seen in the everyday religious language persons use to talk about God. Second order reflection explains and evaluates first order language and becomes our theology, which ultimately produces doctrine. In third order reflection, reflection occurs on reflection itself. In other words, one reflects on the way in which judgments/evaluations are made and conducts a critical evaluation of the appropriateness of such procedures. Jennings sums this up stating, "Thus theological method [including pastoral theology] is concerned with an evaluation of sources, norms, and procedures of theological judgments" (Jennings, 1900, p. 862).[8] Given this understanding, it is vital that I locate myself and name my sources and guiding norms before I unpack my methodology in more depth in the next chapter.

Contextual Factors:

Social Location, Authoritative Sources, and Guiding Theological Commitments

Social Location

This is a project that seeks to bring my Reformed theological heritage into conversation with a variety of cognate disciplines (neuroscience, exercise physiology, psychology, narrative theory, critical theory, complexity theory, and so on) within a milieu of postmodernity. At first glance,

[8] Pastoral theologian and professor at Brite Divinity School, Joretta Marshall, cites Jennings' work in her chapter, "Methods in Pastoral theology, care, and counseling," in Nancy Ramsay (Ed.), *Pastoral Care and Counseling: Redefining the Paradigm*s (Abingdon, 2004). In addition to Jennings' model, Marshall proposes that there are "five constitutive elements" in the construction of a pastoral theological method. The elements include: (1) the explicit or implicit role of theology; (2) the relationship of theology to various fields and disciplines; (3) the import of communities and context; (4) the integration of theory and praxis; and (5) the role of experience (pp. 137-154).

this might appear to be a bit disjointed or a patch work of fitting together disciplines that do not "belong" together. And I must admit that I often have wondered how to bring together the various aspects of identity(ies) I embody as a pastoral theologian, ordained minister, pastoral counselor, PhD candidate in pastoral theology, care, and counseling, and formerly certified personal trainer through the American Council on Exercise (ACE). I am also shaped by my own embodiment as a Caucasian, heterosexual man, who grew up in the socioeconomic middle class in the Midwest part of the United States. I was the youngest of three and the only able bodied child in the family, as both my older brother and sister are physically disabled with Muscular Dystrophy (MD). Lastly, I am and have been interracially married to a Japanese-American woman for nearly ten years, have a two-year old daughter, and another daughter on the way.

My experience of navigating this multivariate identity has revealed the layered, hybrid, and fluid quality of life and identity for all of us in the postmodern milieu of social construction – seeing only in part and relying on our local and situated knowing rather than predetermined given understandings. This also leads to an understanding of human personhood which accounts for the struggles, frustrations, and disappointments of our lived experience as embodied beings. Ultimately, while sometimes painful, this awareness leads to a more critical and nuanced, a more truthful and pragmatic, construction of what it means to be a human person.

Navigating my identity has also taught me that while distinct in more obvious ways, there are remarkable overlaps in each of the above named disciplines' approaches to health and well-being. While one should not conflate one discipline or approach with another, there is tremendous opportunity to engage in dialogue among the disciplines. This dissertation is a step in that direction as I am proposing a pastoral theology of "wellness" based on our experience as embodied beings.

Authoritative Sources

As a Reformed, and always reforming, pastoral theologian and caregiver, I draw on numerous sources to make "reasoned judgments" in light of each particular context and situation of caregiving (Gorsuch, 2001, p. 3). These sources stem from my location and formation as a person, theologian, pastor, pastoral caregiver, scholar, and are reflective of the interdisciplinary nature of pastoral theology. As an interdisciplinary pursuit, pastoral theology acknowledges that our theology and practices of caregiving deepen and expand as new conversation partners enter the conversation with our "working theologies." This process is often referred to as "revised critical-correlation" (Tracy, 1983; Browning, 1983, 1991) in pastoral theology. Former Professor of Pastoral Theology, Care, and Counseling at Brite Divinity School, Nancy Gorsuch, names the impact of this conversation well. She writes that often times such conversation partners "push the limits of our theological and therapeutic assumptions and provide space for revitalizing our sense of purpose and effectiveness in ministry and clarifying appropriate boundaries and relations amongst the sources informing our care" (Gorsuch, 2001, p. 6). Such an approach allows for contextual understandings of persons and situations in all their complexities and particularities, and leads to more just and effective caregiving.

In light of this mutually critical-correlational approach, I bring numerous sources from theology, the social sciences, and lived experience into conversation and make reasoned judgments to fit the particular context and situation. By "conversation" I mean a self-reflective, two-way, mutually critical dialogue whereby each partner (discipline) asks hard questions of the others in order to expose hidden biases and norms, and to ensure one discipline does not receive primacy in the conversation. I deliberately bring together diverse sources and allow each

discipline to inform, critique, expand, and refine the others because this process leads to thicker, more nuanced, and newer understandings of human persons and situations.

The sources that I bring to this process are: my theological heritage in the Reformed and always reforming tradition of the Christian faith,[9] and liberationist, feminist, and process theological constructions; the social sciences (most prominently neuroscience, exercise physiology, critical theory, and narrative theory); and the lived experience of participants in this study. I use a critical-correlational approach because I realize the importance of critical and deconstructive approaches to knowledge and remain hermeneutically suspicious of unexamined truth claims – seeking to re/construct appropriate, relevant, and just practices of pastoral care in light of the lived experience(s) of those who seek care.

Hermeneutical Perspective

In my Reformed/reforming pursuit, I find the hermeneutics of liberation, feminist, and socio-critical reflection most useful. These approaches are based a larger paradigm of deconstructive and liberative impetus informed by critical theory; as well as valuing lived experience as a vital source for theological reflection and construction (Thiselton, 1992). In other words, these approaches unmask the biased and often oppressive unexamined and acontextual truth claims and demand a critical re-examination and re-interpretation of scripture and tradition based on the lived experience of "others." The result is often a deconstruction of the dominant cultural understandings and reconstruction of more mutual, liberative, and just forms of living in the quest for well-being for all persons.

[9] These include Scripture and the Creeds and Standards of Tradition in the Reformed Church in America. The Creeds and Standards consist of: (1) *The Apostle's Creed*; (2) *The Athanasian Creed*; (3) *The Nicene Creed*; (4) *The Heidelberg Catechism*; (5) *The Belgic Confession*; and (6) *The Canons of Dordt*; and most recently, *The Belhar Confession*, which comes out of the struggle for racial justice in South Africa as the Dutch Reformed Church acknowledged it's errors, sought repentance and now affirms racial equality.

Guiding Theological Commitments

I have developed five guiding theological themes for my Reformed, and always reforming pastoral theological praxis, as I bring my sources, norms, and hermeneutical perspective into conversation with one another, and with my experiences of pastoral caregiving encounters. These themes include: (1) All persons are created by and in the image of God and thus have value (*Imago Dei),* (2) The pursuit of understanding of human persons and wellness must be interdisciplinary, (3) Persons are created inherently relational, with relational capacities, but must seek to live out our relationality justly in a world with limited resources and abuses of power (*relational justice),* (4) Knowing is partial, particular, and political in nature (*situated, (not)knowing),* and (5) God is present and working in seen and unforeseen ways, liberating, redeeming, reconciling, and healing the world back to Godself, and we are called to participate in this process (*divine initiative, human response).* These five themes shape the way that I construct theological anthropology, relationality, and guide my pastoral theology of "wellness."

BRIEF LITERATURE REVIEW

My work on a holistic, embodied understanding of "wellness" expands the conversation of neuroscience and pastoral theology to pay particular attention the correlation between care for the other and care of self. Additionally, this study presents and understanding of wellness, which highlights the importance of one's intra-relationship in this process. I do this by building upon previous works in the pastoral theological literature and thus seek to provide a brief review of the pastoral theological literature as it pertains and intersects my work. In an effort to make this easily accessible, I have divided this section into three sub-areas because pastoral theologians

have engaged various aspects of what I consider the "wholeness/wellness paradigm" and they provide a certain foundation upon which my work extends. The areas include: (1) theological anthropology, (2) neuroscience and pastoral theology, care, and counseling, and (3) wholeness and well-being in pastoral theology, care, and counseling.

Theological Anthropology

In the introductory chapter to his co-edited text, *The Treasure of Earthen Vessels: Explorations in Theological Anthropology*, (1994), David Waanders traces the history of Christian theological anthropology. Waanders states that most theologians have traditionally framed the doctrinal understanding of human beings in the divine/human relational terms based on the Augustinian notion that human hearts are restless until they find their rest in God (p. 2). He explains that Augustine was pointing to the inability of human beings to understand themselves fully, apart from their relationship with God (Waanders, 1994). Additionally, Waanders points out that historically, protestant theological formulations have held to the fact that "human beings cannot understand themselves completely without some revelatory influence that comes from beyond themselves" (p. 3). This stance influenced the Reformers such as Luther and Calvin, who saw human sinfulness as the root of distorted human perspective, and thus the need for persons to view themselves through a divine perspective which is depicted in Scripture. Moreover, the main purpose or *telos* of human life was to glorify God and to enjoy [relationship with] God forever (*Heidelberg Catechism*, 1563). Karl Barth continued this position. However, as the modern era dawned thinkers were not satisfied with such removed, propositionally based constructions of human personhood and sought to expand previous notions.

For the modern era of theological inquiry, especially within the practical theological fields, it was German theologian Friedrich Schleiermacher, who claimed that human experience was the starting place for theological inquiry (Childs & Waanders, 1994). This view changed the paradigm of theological inquiry and led to theologians using the human and social sciences ever-increasingly to understand theological anthropology. One of the early leaders of this new pursuit was Wolfhart Pannenberg, who used biology, psychology, sociology, and cultural theory in constructing a theological understanding of human beings (Childs & Waanders, 1994). Pannenberg accused Barth of "theological subjectivism" because Barth began his theological inquiry with God and provided no rational basis for his position (Childs & Waanders, 1994). In other words, Pannenberg believed that Barth's theology was removed and simply "applied" propositions to human experience rather than theology emerging from that experience.

Schleiermacher and Pannenberg paved the way for a new type of theological anthropological construction and set the tone for what would become the pastoral care movement in America. E. Brooks Holifield outlines the shifting understanding of theological anthropology and practices of pastoral caregiving from the colonial period to the 1960s well in his text, *A History of Pastoral Care in America: From Salvation to Self-Realization* (Wipf & Stock, 1983). Holified writes that there is a notable shift in the "ideal of self-denial to one of self-love, from self-love to self-culture, from self-culture to self-mastery, from self-mastery to self-realization within a trustworthy culture, and finally to a later form of self-realization counter posed against cultural mores and social institutions" (p. 12).

Notions of theological anthropology were next addressed most explicitly by former Princeton Theological Seminary professor, James Lapsley, in his text, *Salvation and Health* (1972). Lapsley wrote this in response to what he deemed a crisis in the church's understanding

of human life and experience. He felt the church did not have the psychological and social scientific sophistication to develop and utilize theories to adequately address the contemporary situation of human life. His main concern was to expand notions of "salvation" to mean more than "escape from divine punishment" (in Childs & Waanders, 1994, p. 106). In other words, Lapsley proposed health to mean having the capacity for appropriate functioning in the interlocking processes of life. His schema included factors of development, maintenance, and participation. Lapsley's work was critiqued for being overly psychological and overly individualistic, yet it did make strides in the field towards more nuanced constructions of "health."

With the rise of critical postmodernity in the 1980s and 90s a new epistemology entered the pastoral theological discourse as paradigms shifted away from individualistic models towards intercultural and communal contextual models based on socio-critical critique. This critique was based on a new appreciation for and attention to the social location of the caregiver, the particularity and complexity of context, and to the analysis of power dynamics (Ramsay, 2004). A new, de-centered, highly relational and contextual understanding of the "self" deconstructed previous notions of personhood and constructed a socially located self (Ramsay, 2004). With a new understanding of the self, the intra-psychic character of human experience was no longer the only concern of caregivers. Rather, pastoral caregivers needed to understand the interconnectedness of human persons and socially constructed systems of power and knowledge, and how these relationships and systems impacted a person's intra-relationality. The new understanding of a systemic and socially located self was primarily due to the work of pastoral theologians who had previously been silenced or marginalized by oppression calling the field to address issues of power and injustice. These scholars are informed by liberationist, feminist,

Womanist, and process theologies, as well as cognate disciplines such as critical theory, multicultural theory, race theory, gender theory, and so on.[10]

This newfound awareness and attention to context challenged the field to critically self-reflect and ever-reform its notions of theological anthropology.[11] However, in our efforts to name and acknowledge the dynamics of inter-relationality, I do not want to lose the importance of our intra-relationality – our connectedness to the various aspects and layers of our embodied experience – after all, the care for the other flows out of the care of self. Thus, I am emphasizing the importance of the intra/inter relationship of our relationality in this dissertation, and encouraging pastoral caregivers to take their embodiment seriously.

Neuroscience and Pastoral theology, care, and counseling

The literature on the intersection of neuroscience and pastoral theology, care, and counseling is quite sparse in comparison to other topics. As mentioned earlier, pastoral theologians have tended to overlook this conversation partner. Yet, within the small number of works by pastoral theologians, and relatively recent awareness of neuroscience, one pastoral theologian has actually been writing about this topic since 1979. James Ashbrook, the former professor of religion and personality at Garrett-Evangelical Theological Seminary, published an article titled, "The Working Brain: A New Model for Theological Exploration" in *Religion in Life* (Spring, 1979, pp. 6-16). This was the first time a pastoral theologian had explored neuroscience. Following this he coined the word "neurotheology in 1984, and wrote a number of articles in the publication, *Zygon: Journal of Religion and Science,* over the years (see *Zygon* 31 No. 3 Spring,

[10] See Ramsay, 2004, pp. 1-44 for a more in-depth discussion.

[11] In his text, *Reforming theological anthropology: After the philosophical turn to relationality*, (2003), F. LeRon Shults, describes the impetus behind this shift as the turn from substance to relationality in Western philosophy – tracing the movement from Aristotle to Kant, and then Hegel to Levinas (see chapter 1, pp. 11-36).

1996, pp. 483-485 for a listing). In an article, entitled "Neurotheology: The working brain and the work of theology,"[12] Ashbrook clarified what he meant by neurotheology. He writes, "To state the relationship between brain and theology cautiously: patterns of belief are the meaning of the mind. Here is 'a pathway to God' (Walaskay, 1979, cited in Ashbrook, 1984). In this article, Ashbrook's point was essentially that we (human beings) know God only through the brain-mind mediated processes of belief and meaning making. His final work, a text coauthored with Carol Rausch Albright, *The Humanizing Brain: Where Religion and Neuroscience Meet* (Pilgrim Press, 1997), made the case that the brain must be the beginning of probing our humanness because it is the brain – particularly the "mind" – and all its capacities that is distinctively human. Moreover, that the brain bridges the imaginative and physical realms in ways that are uniquely personal, thus neuroscience deserves more attention in the quest for "making sense of God" (p. xxii). It is the meaning making process of the mind/brain, a process that comes out of lived experience that I am highlighting in this dissertation. Each of us strives to "make sense" of our lives through stories constructed in a complex process of memory, imagination, movement, and experience.

One of Ashbrook's former students and colleagues, David Hogue, continued the work of pastoral theology and neuroscience in his text, *Remembering the Future, Imagining the Past* (Pilgrim Press, 2003). Hogue zeroes in on two main features of the human brain – memory and imagination – and explores their implications for religious life and practice. He points out that remembering and imagining are not separate processes, as we always live "on the cusp between the past and future" making meaning out of our experiences (p. 4). And that the brain sciences underscore the Christian theological concept of the soul. Moreover, the particular qualities of the human brain – perception, memory, and imagination – are vital resources in the quest of living faithfully in worship, practice, care and counseling, as persons and communities of faith.

[12] *Zygon*, Vol 19., No. 3, September, 1984.

Hogue was one of the plenary speakers at the annual conference of the Society for Pastoral Theology in June 2010. The theme for the conference was "Science and Spirituality in Pastoral Theology." Hogue presented a paper on the neuroscientific concept of "mirror neurons" and their connection to our capacity for empathy (Hogue, 2010).[13] The neurosciences have revealed that we are literally wired to one another through mirror neurons in such profound ways that one person's experiences and actions actually ignite and shape another's brain activity as the observer connects with and "figures out" what the other is doing/will do through a mirroring process. Hogue used this research to note the implications for empathy within in pastoral care and counseling, emphasizing the call and quality of Christian love in light of the neuroscientific insights of mirror neurons and our "essential relatedness" (p. 23).

A third pastoral theologian to specifically and extensively address issues of cognitive science in their work is the late Andy Lester. Lester explored the neuroscience of brain processes in the emotion of anger in his text, *The Angry Christian: A Theology for Care and Counseling* (Westminster John Knox Press, 2003).[14] After establishing the significance of emotion in human experience, exploring a theological perspective on emotion, and examining the differences between anger and aggression, Lester turns to addressing the question "what happens in the human brain when anger occurs?" He concludes that anger is the result of a "threat" response and/or "fear" response, wherein the brain communicates a "call to arms" based on instinctual wiring in the brain-body and previous experience (memory) as our brain interprets the stimuli. Ultimately, Lester concludes that despite the unconscious and autonomic aspects of anger as it is processed in the brain, human persons still have the capacity and responsibility for adjusting

[13] Hogue's paper is titled, "Brain Matters: Neuroscience, Empathy, and Pastoral Theology." This is a recent work of Hogue's, and one I found particularly helpful in exploring the neurobiological understandings of empathy. Thus, I refer to this paper throughout this dissertation.

[14] See chapter 5 – "Where Does Anger Come From? The Neuroscience Contribution."

their responses and behaviors in times of perceived threat. There are times when "protecting the integrity of the self and the self's special relationships" warrants angry responses; there are also times when persons "allow selfish, immature interpretations of events to trigger angry responses that are destructive" (p. 89). The Christian is called to find ways of handling anger creatively.

I appreciate the contribution that each of the above named pastoral theologians have made in the conversation of neuroscience and pastoral theology; yet, it appears that each approach continues the tendency of favoring the brain activities of the "mind," or a disembodied understanding, and loss of the importance of the embodied quality to the brain. I urge us not to overlook the embodied quality of the brain in this dissertation. Of course, the human being is astounding and cannot be contained entirely in one's embodiment, yet I believe that neuroscience illustrates that our minds and brains are embodied. Thus, our bodies are a vital source in every function of our brains. This is why I believe practices of wellness are potentially so valuable for pastoral caregivers and why it is important to show the connection between the care of self and the care of other.

Wholeness, Wellness, and Well-Being in Pastoral theology, care, and counseling

Historically pastoral caregiving has been categorized into certain functions – healing, guiding, sustaining, and reconciling (and later liberating, nurturing, and empowering were added) – and is part of an age-long activity of the "cure of souls" present throughout the centuries and communities of faith. Egypt and Babylon had classes of persons known as "dispensers of guidance" as early as 2800 years BCE whereby teachings and writings were filled with moral injunctions and stories-with-a-moral told to instruct others in correct ways of living (McNeill, 1951, p. 3). Many cultures also highlighted a "mentoring" structure wherein older members of

the society or community served as gurus, sheiks, murshids, and sanseis, and Socrates wished to be known as *iatros tes psuches* (healer of souls) and began a tradition of viewing the philosopher as the "physician of the soul" (Lartey, 2003, p. 43). Additionally, Israel had sages, prophets, and wise persons (1 Kings 4:31 and 1 Chronicles 2:6) (Lartey, 2003). Finally, certain Hebrew texts were produced and known as "wisdom literature" including: Job, the Psalms, Proverbs, Ecclesiastes, and the Wisdom of Solomon; and these texts offered practical guidance to daily living.

Notions of pastoral healing and care-giving predate Christianity, and are thus not the exclusive domain of the Church. However, Christianity, throughout the centuries, certainly emphasized pastoral healing and care-giving. One text, *Pastoral Care in Historical Perspective* (Prentice Hall, 1964), by William Clebsch and Charles Jaekle, sought to systematize the historical conceptions of pastoral care and counseling. While outdated now, this text identified a fourfold typology of pastoral care-giving, naming four pastoral functions of *healing, guiding, sustaining,* and *reconciling*. Postmodern insights and sensitivities to context and particularity expanded these four functions to include *liberation, empowerment, advocacy,* and *contextual/cultural analysis* as part of the pastoral caregiving process.

Each of the above stated advancements in the field of pastoral theology critiqued and expanded previous understandings; yet, within them there remains an implicit notion of healing, wholeness, and well-being. Professor of pastoral counseling at Iliff School of Theology, Larry Kent Graham, names this well in his article on healing in the *Dictionary of Pastoral Care and Counseling* (Abingdon, 1990). Graham outlines the history of healing in the Christian tradition, from the ancient to modern pastoral approaches. Most significantly for this project, Graham ties the notion of wholeness in pastoral caregiving to the Hebrew concept of *Shalom*. By shalom he

means that wholeness consists of four key facets: (1) bodily wholeness, (2) mental and emotional functioning, (3) interpersonal reconciliation, and 4) spiritual aliveness (Graham, 1990, p. 499). Moreover, that shalom has a social aspect as well, extending to relationships among nations and an ecological aspect of stewardship for the earth. In other words, there is a "dynamic wholeness" of body, mind, spirit, society, and the world, which derives from being in proper relation to God (Graham, 1990, p. 497).

While Graham's overview is helpful in that is it systemic and holistic, it does not go into much depth about the quality of wholeness it proposes – particularly "bodily wholeness." For instance, what exactly constitutes a "whole" body? And how does one's "bodily wholeness" interact or not interact with the "mental and emotional" aspects of human life? Furthermore, what is the intra-relational quality to human life and how does this influence the inter-relational quality and visa versa? These are questions I seek to answer in this project.

Two former presidents of the American Association of Pastoral Counselors (AAPC) – Howard Clinebell and Margeret Zipse Kornfeld – sought to address the questions of human "wholeness" and "well-being" as well. Clinebell was a pioneer in terms of addressing aspects of health and wholeness systemically. Others had spent time theorizing about intrapsychic wholeness and began to wonder about the relationship of health and salvation (Lapsly), but Clinebell extended his notions of wholeness and well-being to another level in his interest of "growth" and "enrichment." Clinebell also sought to assist others to develop their potentialities via their "growth élan" through the seven dimensions of life: mind, body, spirit, love, work, play, and earth (*Well-Being*, 1991). In this text, Clinebell explores the seven dimensions, addresses challenges to well-being, and promotes the goals of liberation and love-centered well-being. In *Spiritually Empowered Wholeness* (The Hayworth Press, 1995), Clinebell expands on his

previous work and explores the seven dimensions of growth, which lead to a "full, rich quality of consciousness, creativity, and relationships" and explains how persons learn to facilitate and accelerate their "potentializing" (p. 2; 25). The dimensions of growth are similar to his dimensions of well-being, yet here he clarifies that spiritual growth intersects all the other areas and is that it's the unifying bond.

In *Cultivating Wholeness: A Guide to Care and Counseling in Faith Communities* (Continuum, 1998), Margeret Zipse Kornfeld, seeks to return to and continue the work of the early pioneers of the pastoral care movement by bringing together practicitioners of the "healing arts." Using the metaphor of a gardener, Kornfeld not only illustrates the various aspects of wholeness – both personally and corporately, but names the reality of limitations within frail human life. Kornfeld points out that to be healthy does not necessarily mean one is "symptom free" as health is not simply the opposite of illness. Rather, holistic health means accepting one's limitations as well as one's strengths (p. 8). Kornfeld also highlights the role of the "community of care" (see chapter 2), and the importance of "tending oneself" as a caregiver (see chapter 10). Overall, this text is an excellent resource for pastoral caregivers at many levels for its practicality and thorough appendices.

The dialogue between science and religion and more specifically between pastoral theology and neuroscience is rich indeed. There are exciting possibilities and potential implications for our constructions of identity, relationality, and theories and practices of pastoral care giving – with others and with ourselves – as we engage the neuroscientific discourse. I believe through this interdisciplinary conversation we will discover new lenses and new layers in our understandings of ourselves, others, our relationality, and increase our abilities to care for others and ourselves. I will engage this pursuit through various lenses in the chapters ahead.

THE JOURNEY AHEAD

In this dissertation, I will argue that using a neuro-theo-logical lens of a holistic, embodied brain ecosystem shapes our operative theological anthropology in ways that will provide profound possibilities – both in providing care for others and in self-care. Moreover, it could potentially lead to a renewed appreciation for our particularities as embodied selves and lead to greater capacities of empathy, compassion, and care for the "other" as we seek to love our neighbor as ourselves. We saw the potential demonstrated in the participant reflections in the opening section of this chapter. These participants named and claimed the importance of their embodiment in new and powerful ways. One participant further reflected how connecting with himself connected him more to God. He shared the following as he reflected on his experience with this project:

> I guess somehow it connects you more with yourself and with God at the same time. I mean when you do the prayer, when you dedicate time for yourself, it's like saying, "God loves you and he wants you to join."

Consequently, this research seems to suggest that awareness of and attunement with one's entire "self" – particularly one's physical embodiment – has the potential to impact one's sense of living well with self, with others, and especially for Christian pastoral caregivers to living well with God.

In short, we in the pastoral caregiving enterprise, have sometimes overlooked, neglected, or downright denied our embodied existence in favor of emphasizing our psycho-social qualities. And while I appreciate and value the shifts towards contextual awareness and analysis in caregiving – particularly in the pastoral care and counseling field, I caution us not to lose sight our embodied "selves" in the midst of honoring particularity. In fact, one's embodiment is a vital

aspect of one's particular location in the world. As we will see, care for and capacity for empathic encounters with the other is directly informed and influenced by one's self-awareness and attunement (Siegel, 2010).

As I make this case in more depth, I will first examine my pastoral theological methodology and research design in the next chapter. In this chapter, I will explain my methodological choices and clarify how and why I use a critical-correlational approach which combines Interpretive Phenomenological Analysis (IPA) with Narrative Analysis. I will also discuss my process of data collection and data analysis, and briefly name why I choose to use the term or concept of "wellness" rather than the more popular term "wholeness" in my construction.

Following this I will revisit the theological and scriptural depictions of human personhood in chapter three. In the chapter, I will reclaim the "goodness" and Godliness of our physical embodiment, explore how human persons process information, construct meaning and identities, and experience the world, as, and only as, embodied beings. My primary focus in the chapter is to revisit the depictions of human persons in key passages of Scripture. Revisiting Scripture is important in this effort because Scripture is an authoritative source for persons of the Christian faith and often times certain key passages are misinterpreted and misunderstood, and erroneously lead to dualistic models of human personhood. Scripture not only names a holistic theological anthropology, it reveals that the body is good and Godly.

Once I have established the need for an embodied approach, I will explore how neuroscience offers new insights into the particular quality and capacity our embodiment in chapter four. In the chapter, I will look at the structures and functions of the brain, explore the holistic loci and multi-directional flow of information, and discuss how plasticity plays an important part of "wellness" in the embodied brain ecosystem. Additionally, I will note the

importance of the mirror neuron system for our understandings of and capacities for empathic encounters.

After exploring the importance and relevance of neuroscience for our understandings of self and other, I will present a working pastoral theological theory of wellness in chapter five. In the chapter, I will expand upon how we might use the insights from neuroscience for our theories and practices of pastoral caregiving and self-care. I will explore the different areas of wellness I propose in light of participant data and discuss how persons author themselves holistically through motor neural system and procedural memory.

Finally, in chapter six I will present some tentative implications for pastoral theology, care, and counseling. In the chapter, I use a kaleidoscope as a metaphor for viewing our complex, multilayered, and dynamic embodied brain ecosystem. I find a kaleidoscope a useful image because it highlights the complex, hybrid, and fluid quality to our identity as a (whole)self-in-relation-in-context.[15] I name four organizing categories, or constellation of lenses, for viewing the human person. They consist of: (1) multilayered, embodied ontology, (2) intra/inter-connected relationality, (3) performative and transformative capacity, and (4) prophetic teleology.

My hope in this journey is that we discover what it means to be not only created in the image of God, but to be "imagers of God." Because paradoxically, the love of neighbor flows out of the love of self, and as we become more attuned to our intra-connectedness, we will naturally be more in tune with our inter-connectedness and thus more able to love our neighbor as ourselves.

[15] I am indebted to pastoral theologian and Associate Professor of Pastoral Care and Counseling at Iliff School of Theology, Carrie Doehring, for introducing this metaphor. I adapt and extend it in this dissertation to include one's layers of intra-relationality. For further information, see footnote number 68 in chapter six.

CHAPTER TWO: A CRITICAL-CORRELATIONAL EXPLORATION OF NEUROPLASTICITY THROUGH ENGAGING IN AND REFLECTING ON PRACTICES OF WELLNESS

Reflecting on and naming one's methodology explicitly is vital because method is constructive. In a chapter entitled, "Methods in Pastoral theology, care, and counseling," Joretta Marshall, names this well.[16] She writes:

> The simple fact that particular questions are asked while others escape thought, that some disciplines are consulted and others are not, or that certain perspectives and concerns are given greater attention while others shift to the background reflect the impact of our methods upon the actual practice, research, scholarship, and writing of pastoral caregivers and counselors. (p. 134)

As Marshall illustrates, one's method is of vital importance as it shapes the process, the outcome(s), and the scope of the project. Therefore, one must be clear about what choices he or she makes and why these particular choices and not others are made.

I utilize a revised critical-correlational method with an emancipatory impetus within a postmodern milieu of pastoral praxis.[17] This method names the importance of both the intra-relationality and inter-relationality of human persons, and that our intra-relationality is vitally connected with our inter-relationality as we live out just ways of loving our neighbors as ourselves. This method arises within the era of critical postmodernity in pastoral theology, which

[16] In Nancy Ramsay, Ed., *Pastoral Care and Counseling: Redefining the Paradigm*s (Abingdon, 2004, pp. 133-154).

[17] Professor of pastoral theology and pastoral counseling at Iliff School of Theology, Carrie Doehring, illustrates that this method fits within the critical scientific and critical confessional methods outlined in the often quoted typology of methodology introduced by Miller and Poling (1985). Additionally, within the critical correlational method there are three subtypes: (1) hermeneutical; (2) emancipatory praxis; and (3) a hybrid of the two, ("A Method of Feminist Pastoral Theology," (pp. 95-111), in Miller-McLemore & Gill-Austern, 1999).

developed over the last 20 years as pastoral theologians deconstructed, refined, and reconstructed models of pastoral theology, care, and counseling as new and different voices entered the conversation (Ramsay, 2004). I will provide a brief overview of this movement in the next section – naming key points of transition in the methodological landscape of pastoral theology throughout the years, but for now I will clarify my method, name why I use this particular method, and illustrate how it contributes to the field of pastoral theology, care, and counseling.

Methodological Contribution to the Field

The method I utilize has to two main elements: revised critical correlational and emancipatory praxis. While I cannot claim credit for introducing an entirely new method, I am bringing an older model up to date with attention to the recent developments in methodology (communal-contextual and intercultural paradigms), as well as advancing it to pay particular attention to the correlation of care for the other with the care of self. Additionally, my method acknowledges "other" ways of knowing than is typically valued in logic or rationality based approaches, and highlights the wisdom and constructive capacities of our physiologies as a vital source of knowledge in ways pastoral theologians have tended to overlook. In other words, I am paying particular attention to how we construct and author our identities, spiritualities, and abilities to relate with others as, and only as, embodied physiological beings. In so doing, I am engaging a relatively new conversation partner (neuroscience) for pastoral theologians.

Critical Correlation

The first element I want to highlight is the critical correlational aspect of bringing neuroscience into conversation with theology from a pastoral theological vantage point. A *critical*

correlational method takes a critical lens to the correlation process to ensure one discipline is not always given primacy in the dialogue. In this self-reflective process, both or all disciplines are reflected upon critically to expose hidden biases and norms and are allowed to stand on their own when engaging in a mutually influential dialogue (Poling & Miller, 1985; Browning, 1991). Thus, as I bring neuroscience into conversation with theology, I allow each discipline to critique, expand, and refine the other, resulting in a thicker understanding of human persons.

The critical correlational process is one of the main forces behind the shifting paradigms in pastoral theology. Pastoral theology's horizons of care and consciousness widened as knowledge from cognate disciplines, such as psychology, sociology, gender studies, critical theory, economics, and so on, were brought into conversation with pastoral theological understandings. Such conversations introduced new questions and ways of knowing, which revised previous understandings and expanded the scope of caregiving beyond intrapsychic foci. In this process it became clear that pastoral theology requires methods that critically reflect upon practices of care that engage in interdisciplinary dialogue (Ramsay, 2004). This is because the theological discourse alone does not provide language for the thickness of human experience and so we must draw on other ways of making meaning of our lived experience to account for complexity and particularity. In short, pastoral theology has been and must continue to be an interdisciplinary pursuit.

In this project the main cognate discipline, neuroscience, is one that has been largely overlooked in the pastoral theological literature.[18] Neuroscience offers new lenses and layers to our knowledge of persons that expand and re/form our theological constructions of human personhood in important ways, which will inform and reform our practices of caregiving – with

[18] I addressed the few pastoral theologians who have engaged this conversation partner in the literature review section of chapter one.

others and in self care. However, neuroscience alone is not the answer. This discourse needs the teleological impetus a pastoral theological perspective provides. For instance, one of the significant contributions of neuroscience is to present a multilayered, embodied anthropology. Neuroscience reveals that there is an embodied quality in everything about us – certainly our physical bodies, but more importantly how our physiologies shape how we construct meaning, identity, culture, and so on. Most often the dominant theological constructions of personhood are dualistic, overemphasizing the "spiritual" qualities of persons while ignoring their embodied nature. This leads to a number of problems such as, disconnecting persons from a vital source of wisdom and knowledge; discounting the spiritual nature to our physical embodiment, prolonged stress and anxiety; potential burnout among pastoral caregivers; and the tendency to overlook systemic and structural injustice in the here-and-now.

These are deep epistemological questions about who we are as human persons and questions that carry ethical, moral, and theological implications. However, while some neuroscientists name altruism and compassion as appearing to be related to "spiritual" experiences and a sense of connectedness with others, the field, as a whole, does not address the question of how we should live out our intra/inter-connected relationality, it simply notes it. Therefore, a pastoral theological perspective is needed to name and provide the teleological impetus for how we should go about living out our intra/inter-relationality justly. In other words, it's one thing to know that we are connected to our neighbor neurologically through the mirror neural system, yet quite another thing to be called to love our neighbors as ourselves through practices of relational justice. The pastoral theological perspective provides the direction, or the way in which we are to live as intra/inter-related beings. This leads to the other important aspect of my method, the emancipatory praxis aspect.

Emancipatory Praxis

The emancipatory praxis element of my method orients and shapes the correlation process. In other words, a pastoral theological approach brings together neuroscience and theology by starting with the lived experience of persons and paying particular attention to just and liberative ways of relating both intra-personally and inter-personally. Furthermore, in a pastoral theological praxis orientation "practical action and theory are held in critical and creative tension," thus knowledge and meaning are constructed in the ongoing spiral process of practice-theory-practice (Lartey, 2006, p. 24). What this means for my research is that I sought to navigate the tensions between the lived experience(s) and practices of persons as they engaged in and reflected on practices of wellness, and the theoretical and theological insights from my sources of theology and neuroscience without conflating or eliminating the differences.

The emancipatory impetus of my method names both the intra-relationality and the inter-relationality of human persons. The former addresses the physiological embodied quality of our personhood. Acknowledging and embracing the wisdom of our embodiment allows for greater capacities of empathy and connection inter-personally (as described above), but also can be liberative intra-personally. Many neuroscientists point out how learning about the brain and its structures and functions is liberative for persons experiencing problems (Ratey, 2001, 2008; Siegel, 2010). What happens is that as persons learn to recognize and understand the various structures and functions of the brain, and see how it works physiologically, they also learn how these elements can get damaged and/or out of balance. When the embodied brain ecosystem gets out of balance and is unable to communicate and function effectively, problems arise. For example, when levels of the chemical serotonin are not quite where they need to be in a particular person's embodied brain, he or she will often experience thoughts, emotions, and

sensations of depressed mood. Additionally, chronic elevated levels of the stress hormone, cortisol, will make it almost impossible for the parasympathetic process to do its job of de-escalation and regulation. A main part of the problem in each case is a brain ecosystem that is not functioning properly, not a deficient person or personality. The neurobiological lens thus provides "space" between the person's identity and the problem that one is experiencing. In narrative theory this is referred to as "externalization" and helps distinguish between the person and the problem.

The latter aspect of emancipatory praxis widens the scope of care beyond the individual to the community and public life. Life itself – neurologically and theologically – is intra/inter-connected and thus is not possible apart from relationship. But what is more crucial than acknowledging our interconnection, is to work towards just and liberative ways of being connected. This clarification signifies a transition towards public theology, or pastoral theology with a transformative impetus in public life, and marks an important expansion to theories and practices of pastoral care and counseling that take the contextual and systemic structures seriously (Cady, 1993 in Ramsay, 2004, p. 14). It also signifies the postmodern epistemology of persons as "de-centered, relational selves," names the ethical norm of "relational justice," and embraces the newer functions of pastoral caregiving: *nurturing*, *liberating*, *empowering*, *advocating*, and *doing contextual analysis* (Clinebell, 1984; Graham, 1995; Watkins Ali, 1999; Ramsay, 2004; Lartey, 2006). I refer to this public theological impetus as the inter-personal emancipatory element of my method.

Together, the inter-personal and intra-personal emancipatory elements of my method remind us that both the person and the system are important in understandings of wellness and we must not lose sight of the "living human document" within "web" of our relationality (Miller-

McLemore, 2008). Moreover, that our intra-relationality is vitally connected with/to our inter-relationality as we live out just ways of loving our neighbor as ourselves.

My methodology and the current milieu of pastoral theology arose out of a historical trajectory which must not be overlooked. Many significant persons shaped and continue to shape the landscape of pastoral theology. Therefore, I wish to provide a brief historical overview of pastoral theological method(s) as a way to note the significant shifts in the field and locate my work within it.

Brief Historical Overview of Pastoral Theological Method

While practices of caregiving done by representative persons have been a part of communities of faith since their inception,[19] the development of pastoral theology as a distinct field within theological education can be traced to Eighteenth century German theologian Friedrich Schleiermacher (Graham et al., 2005, pp. 2-3). Schleiermacher introduced a three-fold structure of theological inquiry for academic curriculum including: "philosophical," "historical," and "practical" theologies as way to organize theological study (Graham et al., 2005, pp. 2-3). Within the branch of practical theology were sub-categories: homiletics, catechetics, liturgics, church jurisprudence and polity, and pastoral care" (Farley, 1987, p. 4). The purpose of practical theology was to apply theological principles to the practical activities of the church and clergy (Woodward and Pattison, 2000). In other words, the student clergy would study philosophical and historical theology and then apply this to the work of church leadership in practical theology (Woodward & Pattison, 2000, p. 24).

Schleiermacher's influence had both a positive and negative impact on pastoral theology, care, and counseling. On one hand, it articulated the importance of theological reflection on the

[19] See Emmanuel Lartey, *In Living Color* (2003), chapter two for a more thorough exploration.

actual practices of the community of faith. This was a vital transition from removed, acontextual propositional forms of theology. However, on the other hand, the term "applied" has often been misunderstood and misused to mean simply applying theological truths of systematic theology to situations as mere techniques, rather than actually doing *real* theology (Lartey, 2006, p. 13). As stated previously, pastoral theologians have pointed out the importance of acknowledging practical and pastoral theology as real theology or a way of doing theology, constructively, contextually, and performatively rather than merely applying theological principles to situations of pastoral caregiving (Burck & Hunter, 1990; Lartey, 2006). Thus, practical and pastoral theology is always contextual and emerges out of the lives of persons and communities of faith, which informs and reforms appropriate responses in caregiving situations.

Pastoral theology has often been categorized as a distinct branch of theological inquiry within the broader area of practical theology (Woodward & Pattison, 2000). As such, pastoral theology has historically upheld four key functions: healing, guiding, sustaining, and reconciling, within the "cure of souls" movement (Clebsch & Jaekle, 1964).[20] This ancient form of pastoral care is what pastoral theologian and Professor of Pastoral Theology, Care, and Counseling at Candler School of Theology, Emory University, Emmanual Lartey, refers to as the "classical-clerical" model of pastoral theology (2006, p. 122).[21] In this model of pastoral theology, all reflective practices and acts of caregiving are done by ordained clergy. The classical-clerical model was operative from the earliest forms of Christianity up until the dawn of the

[20] Seward Hiltner named three functions: healing, guiding, and sustaining in his *Preface to Pastoral Theology* (Abingdon, 1958), but later a fourth was added.

[21] Lartey draws from John Patton's three-fold typology of pastoral care depicted in *Pastoral Care in Context* (Westminster John Knox, 1993). Patton identifies three paradigms of pastoral care: the classical, the clinical pastoral, and the communal contextual (p. 242). Patton explains that the classical emphasized the Christian message that is conveyed in pastoral care; the clinical pastoral focused on an understanding of the person giving and the persons receiving the message as essential to care; and the communal contextual emphasized the community's influence on the message and the messenger, and that there are important contextual differences of which one must be aware (p. 242).

psychological explosion of the early twentieth century wherein the social sciences gained popularity and momentum – especially in the United States. The turn to the social sciences in all intellectual fields led to a new model of pastoral theology known as the "clinical-pastoral" model and marked a transition from pre-modern to modern pastoral theology (Latery, 2006, p. 123; Doehring, 2006).[22]

Modern pastoral theology arose out of the Clinical Pastoral Education (CPE) movement introduced by clergy member Anton Boisen and psychiatrist Richard Cabot in the 1920-1930s wherein clergy experienced clinical work in psychiatric hospitals as a part of their theological training. Boisen believed that clergy must not only study and reflect theologically on the historical and classical documents in the academy, but must also study and reflect on "living human documents." One of Boisen's students, and later Professor of Pastoral Theology at Princeton University, Seward Hiltner, argued for the legitimacy of pastoral theology as a formal branch of theology in his *Preface to Pastoral Theology* (Abingdon, 1958). In this text, Hiltner clarified that pastoral theology was:

> That branch or field of theological knowledge and inquiry that brings the shepherding perspective to bear upon all the operations and functions of the church and the minister, and then draws conclusions of a theological order from reflection on these observations. (p. 20)

Hiltner further stated that pastoral theology is an "operation-centered" or "function-centered" branch of theology rather than a "logic-centered" one and that this makes it distinctive. The distinctive feature of operation-centered inquiries such as pastoral theology is that "their theological conclusions, or theory, or basic principles, emerge from reflection primarily on acts or events or functions from a particular perspective" (Hiltner, 1958, p. 20).

[22] Pastoral theologian Carrie Doehring, presents a model of pastoral theology, care, and counseling that is "tri-focal" – utilizing pre-modern, modern and postmodern approaches to knowledge simultaneously (*The Practice of Pastoral Care: A postmodern approach*, Westminster John Knox, 2006).

Hiltner certainly helped shape the field of pastoral theology in important ways, yet more recent scholarship has pointed out his limitations – particularly in terms of methodology. Hiltner utilized one method, a correlational model of bringing theological discourse into conversation with cognate disciplines based on theologian Paul Tillich. Hiltner called this a "two-way street;" however, many pastoral theologians have illustrated how this correlation model was really unidirectional – theological norms critique and correct the other disciplines while remaining unchallenged themselves. Thus, it is not truly a two-way process.

Don Browning was one of the first to critique and redefine this correlational method. Browning, in his attention to more public and ethical dimensions of practical (and pastoral) theological method utilized David Tracy's "revised critical correlational" method to argue for a "fundamentally reciprocal" relationship between theological and social scientific sources in a practical/pastoral theological method (1987; 1991). Browning insisted that both discourses be open to revision and that one must name the operative and often unacknowledged ethical and philosophical norms which shape a particular discipline – especially psychology. The result was a more critically reflective and reciprocal process of theological reflection for practical and pastoral theology. Browning also emphasized the usefulness of theological sources to engage and shape cultural norms and values (Ramsay, 2004). This expanded the scope of the theological enterprise into the public arena in new ways.

Browning marked an influential shift towards reciprocal interdisciplinary methods for pastoral and practical theology and raised awareness about implicit norms going unnamed. Both are helpful ways of reforming the scope and purpose of practical and pastoral theology. Yet, postmodern pastoral theologians have illustrated the lack of emancipatory *telos* and his preference for logical constructions in his method (Chopp, 1987; Ramsay, 2004). Thus, I find

pastoral theologians with a liberative impetus such as Bonnie Miller-McLemore (1993) and James Poling (1991) who expanded Browning's hermeneutical approach to include a critical lens (Poling & Miller, 1985) and a prophetic challenge towards oppressive power structures more helpful in my construction of pastoral theological method. It is not enough to simply note competing norms in light of structures and systems of opposition; we must deconstruct and reconstruct more liberative and life-giving models of relating with others and with our (embodied) selves. This critical awareness of power dynamics and structures of oppression arose as new voices joined the conversation in pastoral theological discourse - voices which were historically underprivileged, underrepresented, marginalized, and silenced. These voices began to redefine the pastoral theological landscape and draw the field's attention to issues of "difference." Thus, pastoral theologians began to engage in public theological discourse with a critical lens towards issues of difference such as race, class, gender, sexual orientation, socioeconomic inequality, cultural imperialism, and so on (Ramsay, 2004). The result has been a new appreciation for the complexity and particularity of lived experience – especially as embodied persons. Thus, bringing together the emancipatory praxis element with the critical correlation method seeks to name oppressive structures as unjust and sinful, and works towards more just and liberative ways of relating.

In addition to critiquing oppressive systems and structures of power and oppression, the emancipatory praxis method critiques overly individualistic and normative approaches to pastoral theology, care, and counseling. This awareness led to the development of new models of pastoral theology – the "communal-contextual" and the "intercultural" models (Patton, 1993; Ramsay, 2004; Lartey, 2006). The communal-contextual model reacted against the earlier models of clericism and clinicalization, and encouraged communal and ecclesial forms of

caregiving (Lartey, 2006, p. 123). In this model the communities of faith are the locus of pastoral theology, care, and counseling, and the clientele is the wider community (Lartey, 2006, p. 123). There is a strong tie to Christian sources and the Church in this model. Consequently, an intercultural and interfaith paradigm arose most recently, which "extends the communal-contextual into the global [inter-faith] nexus" (Lartey, 2006, p. 124). This approach seeks global justice and argues that wisdom and local knowledge do not belong to one group, race, ideology, or faith (Lartey, 2006, p. 124).

In this project, I bring neuroscience into conversation with my Reformed, yet ever-Reforming theological heritage influenced by liberation, feminist, and process theological understandings in a pastoral theological approach. Additionally, I rely on other cognate disciplines or "conversation partners" to inform and enrich my understandings of "wellness." Such disciplines include: narrative theory, complexity theory,[23] critical theory, nutrition theory, biology, and theories of exercise physiology. As a pastoral theological method this correlation is grounded in the lives and meaning making experiences of pastoral caregivers as they reflect on and engage in a framework of wellness including: (1) Attunement, (2) Nourishment, (3) Movement, (4) Rest and Renewal, and (5) Relationships.

[23] Complexity theory is a mathematical theory of complex systems that is beneficial for explorations of the mind. "It offers a plausible scientific foundation for the benefits of integration," writes Dr. Dan Siegel, clinical professor of psychiatry at UCLA medical school, co-director of the UCLA Mindful Awareness Research Center, and executive director of the Mindsight Institute. Siegel continues, "complexity theory examines systems that are capable of becoming chaotic and are open to receiving input from outside themselves" (Siegel, 2010, p. 68). Such systems regulate their own emergence as "organization emerges from the interactions among the basic elements that comprise the system" (p. 68). The key concept within complexity theory is *integration* – a form of complexity that does not err too much towards chaos or rigidity, but maintains a harmony that is flexible, adaptive, coherent, energized and stable (Siegel, 2010, p. 70).

RESEARCH METHODOLOGY:
QUESTIONS, APPROACH, DATA COLLECTION, AND ANALYSIS

Research Question(s)

In this dissertation, I studied if engaging in and reflecting on a holistic model of wellness impacts a pastoral caregiver's theological anthropology and theories and practices of caregiving – for others as well as for self. Moreover, I explored what this might mean moving forward for practices of pastoral care and counseling. In designing this research, my hunch was that the critical-correlational conversation between neuroscience and pastoral theology would be extremely fertile – that it had the potential to impact one's theological anthropology and practices of caregiving with self and others. However, we must also keep in mind that definitive claims and/or naming direct causal relationships is impossible given the way the brain works. Nevertheless, there are some important, albeit tentative, connections that appear to be present in the dialogue between neuroscience and pastoral theology for understandings of self, others, and God, as well as how persons relate empathically with one another.

In order to explore these potential connections, I developed the five-fold theory of wellness described previously and asked pastoral caregivers to engage in and reflect on practices of wellness within each area, as well as the program as a whole (see the appendix for a full description of the research methods and interview protocols). Each week pastors and pastoral caregivers engaged in wellness practices and kept a log of their activities and experiences. I asked them to record each of their practices and particularly to note when and how they adapted and contextualized the suggestions. Participants were free to do as much or as little as they preferred, and strongly encouraged to adapt the model to "fit" their contextuality.

To frame the research for my particular critical-correlational project, I explored the following main question(s):

> Does a critical-correlational conversation between neuroscience and (pastoral)theology expand, revise, or alter understandings of identity and relationality with self, others, and God for pastors/pastoral caregivers? If so, in what ways?

As will be demonstrated in later chapters (particularly chapter five), engaging in a holistic model of wellness appears to impact pastoral caregivers' practices of self care and understandings of self, others, and one's sense of relationality.[24] For instance, following the wellness program participants most often named "balance," "integration," and "awareness (attunement)" with the various aspects of a "holistic" self as key components of wellness. As an example, when asked about one's understanding of the human person, one participant reflected:

> Balance to me now means something more than a teeter totter – it probably means a record, you know or a tire – where balance isn't just two poles, it's not bi-polar, but there are a number of facets…so a broader picture.

Another participant stated his new awareness of self and others this way:

> To me, it's a lot like a jigsaw puzzle, maybe not with a thousand pieces, but 5-6-7 pieces and – after really concentrating on this [wellness model], I am seeing how important it is to look at all the different pieces [be]cause any of them lacking, or not doing well, has an effect on you. So the term that comes is mind how "holistic" we are. But often we don't operate or think about people in a holistic way – how it all ties together. That was really interesting for me to think that way. It's helped me think about people a little bit differently – knowing everything affects everything else.

[24] In fact, some participants named how simply reading through the participant information packet for this project caused them to begin to rethink their understanding of self. This reveals an important caution in this research. While I am exploring potential and tentative connections between the wellness program and changes in self-understanding as a result of brain plasticity, I realize that the brain does not work through direct causal relationships; rather it works through complex systems of information and meaning. Thus, in my research results I point to potential connections and not direct causal relationships. Each potential connection is an area that warrants further research.

Participants also named areas where their theological understandings expanded and enriched the neuroscientific literature, such as "contentment," "satisfaction," "sense of purpose," and "joy" in their work. Each of these elements are the intangible aspects of living abundantly, which Christ emphasized for all persons (Jn. 10:10), but that neuroscience has more difficulty in describing. In fact, the intangible findings stated above were so powerful in the participant experiences, I revised my theory of wellness to include a central, integrative force – "embracing one's calling" – to the five areas of wellness. It was this sense of being called (by God) that provided a teleological direction or focus for the participants, and is what was most meaningful in their understandings of wellness.

Additionally, this research appears to suggest that one's capacity for empathic encounters with others is directly tied to one's own connectedness (attunement) with self. One participant in particular – Rev. Burke – modeled this in an encounter with his daughter following a long, stressful, and exhausting day at a work. He gained new appreciation for the importance and connection of his embodiment and self-care to care for others. I will expand on this experience in the next chapter.

Research Approach

This study uses a critical-correlational method with a qualitative approach of valuing "thick description" and participant ways of making meaning in their experience. It includes the use of numerically valued self-reports,[25] yet does so in a qualitative rather than purely quantitative way. Thus, the approach is considered "pluralistic qualitative" rather than "mixed-method" because

[25] The self-score reports were provided in both pre-program and post-program interviews as I asked participants to score themselves on the different areas of wellness using a Likert-type style scale of 1-5 (there was one question that used a scale of 1-10).

the philosophical orientation remains within the postmodern era of social constructionism and the approach is de-centered and collaborative. While I did use the self-scores to determine change, my main interest is not in statistical analysis or standardized, objective reports, but the ways in which participants name, story, and interpret their experience(s). In other words, I believe meaning and reality are constructed by the persons within it – both the participant and researcher (Gall, Gall, & Borg, 1999; Frost, 2011). This is known as an "interpretist" or "social constructionist" epistemological worldview as opposed to a "positivist" one (Gall, Gall, & Borg, 1999; Frost, 2011). What this means for my study is that the quantitative data (numerical values) are understood within the larger narrative of meaning and do not represent an objective norm or reality by themselves. For instance, the score of "3" may mean different things to different participants. Therefore, I was more interested in how the self-scores changed from pre-program self-assessment to post-program self-assessment. Additionally, I did not evaluate participants' self-scores, nor score them myself; rather, I used the score as they named it as a way to enhance understanding (Frost, 2011).

The pluralistic qualitative approach I used combined interpretive phenomenological analysis (IPA) with narrative analysis (Gall, Gall, & Borg, 1999; Frost, 2011).[26] I explored how persons' experience and make sense (meaning) of that experience uniquely and creatively through the use of "storying" holistically (linguistically and physiologically, consciously and unconsciously) as they engaged in and reflected on practices of wellness. In other words, how one re/author's his or her identity holistically – both linguistically *and physiologically*. One

[26] This is according to a 17-fold typology of qualitative research traditions proposed by Gall, Gall, and Borg (1996, p. 593; updated in 1999, p. 309). Gall, Gall, and Borg present 17 different qualitative approaches to research and organize them into three categories: (1) Communication, (2) Inner Experience, and (3) Society and Culture. Those in the communication category "seek to understand language and communication phenomena," those in the inner experience category "focus on understanding the nature of inner experience," and those in the society and culture category "investigate social and cultural phenomena" (1999, pp. 309-310).

participant – Rev. Dykstra – named this in chapter one. He reflected on how physical activity impacts his sense of self:

> I feel the best when I make sure I've added some kind of movement or physical things to me. This doesn't mean I should neglect the rest, but after I've done some good physical things and good nutritional things, you really feel good about yourself.

Other participants also connected increases in movement or physical activity with improvements in wellness. Furthermore, participants reported improved nutritional habits; increased amounts of sleep; increased attunement with self and focus on self-care; increased focus on relationships with others and God; and reduced weekly work hours. Each of these elements was reported to be "good" or "helpful" in participant experiences of wellness. Additionally, I discovered that persons use the words "integration" and "balance" most often to describe their ideal of wellness, while also naming the importance of "contentment," "satisfaction," and having a "sense of purpose."

Interpretive Phenomenological Analysis

The interpretive phenomenological analysis (IPA) methodology can be thought of as middle way between different qualitative approaches as it combines insights from phenomenology, hermeneutic philosophy, and engagement with subjective experience (Shinebourne, 2011). In explaining IPA, author Pnina Shinebourne writes:

> In common with phenomenological psychology it offers researchers an avenue to study subjective experiences and the meanings that people attribute to their experience. In common with discursive psychology, IPA accepts that the research process is fundamentally hermeneutic, with both researcher and participants engaging in interpretive activities that are constrained by shared social and cultural discourses. (Shinebourne, 2011, p. 45)

Furthermore, IPA is considered idiographic in its detailed attention to a single case or a small number of cases (Shinehbourne, 2011, p. 49). This allows for a richness and depth of experience that might not be possible in studies with larger numbers of participants. In addition to studying meanings within a particular case or cases, the IPA researcher seeks to connect the findings to existing literature to help the reader see how the case relates to other relevant research (Shinebourne, 2011, p. 49). I have done this by noting the times that the participants' experiences connected with or confirmed the literature.

Narrative Analysis

Narrative analysis is another layer of inquiry in my approach. Narrative analysis is based on narrative theory, or the understanding that reality is socially constructed as persons make sense or meaning of the events and experiences in their lives through the stories they tell and the stories that are told about/around them (Epston & White, 1990). In other words, events and experiences do not have meaning in-and-of-themselves, as if reality was "out there" to be discovered, but meaning only arises as persons' reflect on and make sense of their experiences (Esin, 2011). This theory is based on the work of Gregory Bateson, Kenneth Gergen, and French philosophers, such as Foucault, Derrida, and Jean-Francois Lyotard. These thinkers saw through the hidden biases and assumptions of dominant discourses and sought to expose the myths of objectivity and name the partiality and situatedness of all knowledge. Moreover, in light of Foucault, they highlighted the fluidity and connection between power and knowledge, and prized the authorial power of naming for oneself and the agentic power to resist. Through their work many once silenced persons and groups found their voice(s) and embraced the power to name and author their identities in new and preferred ways. My research seeks to create space for

participants to do this re/authoring of their identities by remaining de-centered and privileging their authorial power and local knowledge. That is why I often included long quotations verbatim rather than providing my own paraphrases. I did this because I wanted the participants' words to stand on their own.

In terms of a research methodology, narrative analysis allows for the researcher to comprehend the complex and multilayered identity persons embody and enact. Author Cigdom Esin, in a chapter on narrative analysis as a qualitative methodology states this well. Esin writes:

> Narrative analysis does not only function as a method through which researchers explore how people remember, structure, and story their experience. It is also a process that can lead researchers to understanding the complexities of human selves, lives, and relations. (Esin, 2011, p. 95)[27]

Therefore, I chose narrative analysis in addition to IPA to allow for a more thorough analysis of the complexities and sometimes contradictory aspects of identity construction. This also reveals my commitment to honor participants' stories as they share them and rely minimally on my own interpretations of their stories.

Within the pluralistic approach, I used the thematic model of analyzing qualitative data using the qualitative research software NVivo10 as a tool to help note key themes and words (Reissman, 2008). In so doing, I looked for themes based on patterns and meanings produced in the data, noted the number of times a particular word or phrase appeared, and grouped them "in connection with the theoretical framework of the research" (Frost, 2011, p. 108).[28] I looked for

[27] Esin also clarifies that topics suited for narrative analysis include: "various aspects of identity, individual experiences of psychological processes, interpersonal and intimate relationships, experiences of body, beauty and health" (Esin, 2011, p. 94).

[28] Frost also states that in practice thematic qualitative researchers "utilize both the ideas and themes from their conceptual framework and 'new' themes in the data while conducting thematic narrative analysis" (Frost, 2011, p. 108).

key words, phrases, and metaphors because these stories shape and construct the realities and identities persons live into (Freedman & Combs, 2002).

My role as researcher is also constructive as part of the qualitative approach in this study. My own social location, history, and experience of embodiment shaped the questions I asked in the interviews and my analysis of them. This self-reflective stance is often referred to as "reflexivity" in qualitative research (Gall, Gall, & Borg, 1999; Frost, 2011). In other words, I, as the researcher, acknowledge my own shaping of the study through the questions I asked, the framework I offered, and the inevitable presumptions I bring to the analysis. However, I also attempted to mitigate distortion through the use of qualitative research software, NVivo10 mentioned above, in the analysis of interview transcriptions. Additionally, I used a narrative stance of remaining de-centered and relying the participants' local knowledge and ways of making meaning.

Data Collection

Given that "IPA requires a data collection method that will invite participants to offer a rich, detailed, and first-person account of their experiences and phenomena," I utilized the lived experience of a small group of pastors/pastoral caregivers as an authoritative source as they engaged in and reflected on a pastoral wellness program in this project (Shinebourne, 2011, p. 54). I conducted pre and post semi-structured interviews, asking participants questions about their way of understanding human persons (theological anthropology); their theories and experiences of wholeness/wellness; their practices of pastoral caregiving and self-care; and to score themselves according to the five areas of wellness. For instance, I asked each participant to give themselves a score from 1-5 on how they would rate themselves in a particular area of

wellness, such as attunement. I used the same set of questions in both pre and post interviews to control for variation. Finally, I asked them to rate their current level of stress and their sense of vitality in ministry.[29] The interviews lasted roughly 60 minutes and were recorded with audio and then transcribed. For a complete list of the interview questions see the appendix at the end of the dissertation.

During the six weeks of the wellness program, I asked participants to engage in and reflect on the "pastoral wellness program" (see chapter one) and keep a "wellness log" of practices. I designed the program to be self-directed and flexible, thus encouraging the participants to do as much or little as they preferred, and then to note when and where they made adjustments. In other words, I provided a loose framework as a starting point, but encouraged each participant to use their own creativity and local knowledge to make the program "fit" their contextuality.[30] One participant noted how she tried to do all of the suggestions when she started, but mid-way through the six weeks realized that she was particularly drawn to the attunement section and so spent most of her time in the remaining weeks there. Additionally, she suggested that some elements of movement like yoga or Tai Chi could be included in this area.

There were eight participants who began the study and six completed it. Thus, I have 14 interviews (8 pre interviews and 6 post interviews), which were transcribed and analyzed. The

[29] This multiple interview format can be part of narrative analysis. Writing on narrative analysis, Cigdom Esin writes, "The construction of rich, detailed narratives within the research context is the key to a good narrative analysis. Therefore, the number of participants is not a major concern. Narrative researchers often tend to interview each participant multiple times so as to capture the changes in the meaning-making process in narratives" (Esin, 2011, p. 98).

[30] I felt it was necessary to provide a basic framework of wellness practices for participants to engage in and reflect on as a starting point so that there would be some commonality amongst the "cases" for analysis. I realize that by doing so, I may have limited some of the possibilities which may have emerged, but I greatly encouraged each participant to utilize their creativity and local knowledge to change and adapt the framework. One participant named this precisely stating, "I think having these aspects that I was writing down helped in terms of providing some structure of what it means to be whole, in terms of taking care of oneself, having time for reflecting, eating well, resting…I think that these are pretty good boundaries."

participant population consisted of pastors/pastoral caregivers from four different mainline and evangelical Protestant denominations. There were three women and five men, ages 29 to 71 and a mix of Asian-American, Caucasian, and Latino ethnicities. The data consisted of verbatim transcripts of both pre and post interviews and wellness logs provided by each participant.

Data Analysis

My analysis of the data was guided by a pluralistic, qualitative approach that combined Interpretive Phenomenological Analysis (IPA) and Narrative Analysis. Researchers use pluralistic methods for different reasons, such as allowing fewer assumptions to influence the understandings, or to allow for greater flexibility (Frost, 2011). I chose this particular combination of methods because I felt it provided the best way of exploring the complexities and layers of meaning making and insight. Additionally, a pluralistic qualitative approach often allows for a more holistic view of persons' experience (Frost, 2011).

In addition the main questions stated previously, I also asked the participants for a meta-analysis of their experience with the project. I asked the following questions in closing the post interview with each participant to allow them to name and story their own experience(s):

1) Did you feel this program was missing anything?
2) Did you change any of the suggested wellness practices? If so, what did you add or take away?
3) Was this program too long, too short, or just about the right length?
4) Was this a positive, negative, or neutral experience for you?
5) What is the most significant thing you feel you are taking away from this experience?
6) What changed, if anything, as a result of this experience? How do you know?
7) Is there anything else that you would like to share?

I will unpack these questions and my findings more thoroughly throughout this dissertation as I propose a working theory of wellness and discuss the potential implications of the research for pastoral theology, care, and counseling.

SUMMARY

In this chapter, I have presented my pastoral theological methodology in particular and traced a brief history of pastoral theological method in general. In so doing, I presented how and why I used a pluralistic qualitative approach to critical correlation in this research and shared what implications this de-centered, reflexive stance has on the research process. Additionally, I explained the research process of data collection and analysis, exploring some of the key questions I asked myself. Finally, I briefly named why I believe using a wellness metaphor is more helpful, liberative, and teleological in our constructions of health and well-being than the more popular wholeness model. In the chapters to follow I will continue to unpack this claim and pay particular attention to how a neuroscientific lens informs a wellness approach, and provides new ways of thinking about identity and relationality, and how best to care for others and self as pastoral theologians and caregivers.

CHAPTER THREE: DECONSTRUCTING AND RECONSTRUCTING UNDERSTANDINGS OF SELF – TOWARD A PASTORAL THEOLOGY OF WELLNESS

Rev. Peter Burke had one of those days where the demands and deadlines exceeded the hours in the day. He tried as best he could to prioritize and balance all of the items which needed his attention (and did so fairly well while at the church). However, once he got home he could not keep it together as all the pressures were adding up, and he "blew up" at his daughter for no apparent reason. He felt "horrible," and it was only after the incident that he realized that he was "totally exhausted" and was not aware of it. In reflecting on this encounter, Rev. Burke stated, "I see now when I'm more rested I'm able to provide better care for my family."

In short, in the midst of demands of ministry Rev. Burke had lost sight of his own needs and thus was not attuned with his embodied experience and less able to encounter others empathically. The neuroscientific way to describe this is that Rev. Burke's brain was dis-regulated and he "lost his mind," or at least his ability to regulate his experience and thought processes and behavioral response. The result: pain and damage to a valuable relationship in his life. Fortunately, he was able to repair this relationship with his daughter, but in chronic, repetitive episodes of dis-regulation such is not always the case.

Rev. Burke was one of the pastors that participated in this study. He shared the above scenario in our interview as he reflected on the challenge of wellness in his life. I believe that if Rev. Burke had developed regular practices of wellness or self-care into his daily/weekly routine, this scenario would have played out differently. I say this because these wellness practices would help him be more mindful and attuned with himself, and thus more able to connected empathetically with his daughter. Further, I believe that developing regular wellness practices would give him an appreciation for his embodiment, teaching him to listen to his embodiment

and be able to regulate and dynamically integrate his mind and experience. I further believe that knowing that his embodied brain works from the "bottom-up" (through the central nervous system) as well as from the "top-down" (in the prefrontal cortex) would have impacted his awareness of self.

In short, I believe that awareness and attunement into his embodied brain ecosystem – its structures and processes – would have made a profound difference and given Rev. Burke greater capacities for an aware and empathic encounter with his daughter. But what's more profound for pastoral theology, care, and counseling is that these neuroscientific resources also will shape the caregiver's ability to engage "otherness" and "difference" and live out relational justice in relationships by forcing him or her to take seriously the importance and particularities of embodiment (race, class, gender, orientation, and so on). Neuroscientists now know that meaning, identity and the ability to relate are all constructed in/through/with our physical embodiment (Johnson, 2007). Removed "logical" and "rational" thinking is a myth. We actually think – theologically and ethically – with our embodied self (Harrison, 1981). And as we learn to embrace the joys and challenges of our own embodiment, we should also gain greater openness, receptivity, and empathy towards other embodied persons.

Additionally, an awareness and appreciation for embodiment should shape a pastoral theological sense of what matters in the here and now. For instance, if the soul/spirit is really embodied, rather than disembodied; and knowledge, meaning, belief, and faith are mediated only through the entire embodied processes, then issues of justice take on new meaning and importance. Then it does matter if the single mother receives financial support to attend college; it does matter if certain groups do not have equal access to health care services or good nutritional food choices; it does matter if jobs pay a fair and competitive wage so that persons are

not forced to juggle two, three, or sometimes four jobs just to make ends meet – knowing their physical bodies cannot possibly function well long-term in doing so. In short, I believe a pastoral theology of wellness reveals how we are called to care for the whole person, and that includes liberation from systems and structures of oppression.

Yet, in order to get there I believe we need to deconstruct a lingering dualistic residue within Christian theological anthropologies and reconstruct a holistic, embodied model of human personhood. After all, Rev. Burke, like many members of the Christian faith, had trouble embracing himself as whole being and thus had not learned how to listen to the wisdom of his physical body – particularly how it shapes and is shaped by neural networks and pathways in complex and dynamic processes of experience and action (Siegel, 2010). Building in regular rituals and practices of wellness into one's daily life shapes the brain and allows for greater regulation and integration of information (Siegel, 2010). In his state of dis-connection and dis-regulation, Rev. Burke lost ability to attune with self and thus was not able to connect with his daughter empathically or effectively, and it caused damage to the relationship and to him.

Consequently, in this chapter, I will deconstruct the dualistic legacy in Christian theological anthropology by critically re-examining the Scriptural sources which informed this view. However, deconstruction alone is not sufficient. Therefore, after I have deconstructed a dualistic theological anthropology, I will propose a corrective holistic model of "wellness," which embraces our embodied brain ecosystems as vital to our ability to regulate and attune with self and engage the other justly.

While, fortunately, there has been some ferment towards more holistic constructions of human persons – particularly within postmodern scholarship – there remains a lingering dualistic residue that often ignores persons' physical embodiment. This is largely due to the influences of philosophers and theologians who proposed sharp distinctions between immaterial (soul/mind) and material (body/brain) elements. In turn, modern philosophers and theologians continued this dualistic thinking throughout the centuries, and it extends to our postmodern milieu.

This underlying dualistic mindset has shaped our understandings of self and our practices of pastoral caregiving – with others and our ability to be attuned to our own selves. Ultimately, leading to disembodied and disinterested ethical norms, which ignore hierarchical power relations and the existential life-struggles of persons and communities, and thus limit our capacities for neighbor love and relational justice (Harrison, 1981). Consequently, I am proposing a re-examination of the influential sources – particularly Scripture and Tradition – as a way of reclaiming and reconstructing a holistic, embodied theological anthropology, which leads to greater capacities for just relating in our intra/inter-relationships.

Dualistic Underpinnings

In my Reformed, ever-reforming pastoral theology the historical trajectory of faith as recorded in Scripture and Tradition are vital sources. However, one must read these sources critically and contextually. Therefore, as I reclaim the goodness and Godliness of human embodiment, I will revisit these sources – particularly Scripture – with a critical lens and deconstruct and reconstruct human personhood.

Providing an exhaustive account of every passage of Scripture that touches on theological anthropology is beyond the scope of this project. This would be overly time consuming and quite frankly challenging, as the biblical authors did not lay out a specific, nor standard depiction of human persons. Rather the authors largely assumed a common knowledge of their readers and did not feel the need to specify the make-up of human persons in great detail. Additionally, my aim is not to provide *the* Scriptural interpretation of human persons (as I do not believe there is a single one), but to illustrate the need for rethinking and re-theologizing Christian theological anthropologies.

Revisiting Scriptural Sources and Contexts

Hebrew Understandings

Fittingly, the first text that most Christian theological anthropologies take into account is the creation narrative in Genesis 1:26-27. This is the text which informs our notions of *Imago Dei* – that human persons are created in the very image, and likeness of the Godhead. This is regularly agreed upon across the board of the theological disciplines. In fact, the majority of the pastors I interviewed for this project named "Imago Dei" specifically as part of their answer to my question about their working theological anthropology.

In the Genesis account we see that our status as human beings is unique amongst the entire created order, and that we have a relational quality and capacity as "imagers" of God. However, what is not clearly articulated in Genesis is the particular quality, make-up, and functionality of our imaging God. Furthermore, in Genesis we read that God created all things, especially humanity and human bodies, in God's image and that it "was good" (Gen. 1:31), but, more importantly, that God did this by literally forming human beings out of the dust of the earth

and breathing life into them (Gen. 2:7). Therefore, human life has always involved a complex and dynamic intra/interconnected whole of physical, spiritual, psychological and social dimensions – none more or less valuable or vital than the others. Poet and novelist, Wendell Berry, captures this understanding delightfully:

> The formula given in Genesis 2:7 is not [hu]man = body + soul; the formula there is soul = dust + breath. According to this verse, God did not make a body and put a soul into it, like a letter into an envelope. [God] formed [hu]mans of dust; then, by breathing [God's] breath into it, [God] made the dust live. The dust, formed as [hu]man and made to live did not *embody* a soul; it *became* a soul. "Soul" here refers to the whole creature. Humanity is thus presented to us in [the human being(s)], not as a creature of two discrete parts temporarily glued together but as a single mystery. (*Sex, Economy, Freedom & Community*, 1993, p. 106).

Examination of the common Hebrew terms used to describe persons further reinforces this unitary view. The term *nephes* is the most common one, used to refer to the whole person, emphasizing the seat of desires and emotion. *Nephes* can also be translated as "person" or a personal pronoun (Lev. 2:1; 4:2; 7:20), and another term, *basar*, is sometimes used in parallel with *nephes*, yet each most accurately refers to both the physical and spiritual qualities of the person (Green, 2004, p. 157). Additionally, the Hebrew Bible uses terms like *leb* and *ruach*, which have complex meanings to describe human persons. *Leb* can be translated as "heart," but can also mean "human existence in its entirety" (Gen. 18:5). R*uach* can be used for "breath" or "spirit," but is also used to denote the "life force" of human persons (Gen. 2:7; Job 12:10; Is. 42:5) (Green, 2004, p. 157).

While this is certainly not an exhaustive account, I hope it is clear that the default for the Hebrew Bible is to depict human persons as an integrated whole, not as separate, distinct parts. Moreover, the Hebrew language simply does not have the lexicon of other languages and thus single words had to be used to describe entire concepts and phrases. Consequently, a literal

word-for-word approach simply cannot grasp the larger meaning in the translations, and one must use thorough contextual analysis in his or her hermeneutical approach.

Greco-Roman Understandings

Generally, the Hebrew understanding of persons as holistic beings is not discounted in Christian thought. However, the dualistic view in the Greco-Roman world of the New Testament overtook this view and established a new normative understanding. While the Greek body-soul dualism is an over simplistic construction of human persons, it has remained influential in the Church and Christian thought.

The Greek influenced New Testament had a larger vocabulary for describing human persons and leaned more towards dualistic interpretations; however, there was not one standard understanding presented. Rather, there were various views of human persons presented (Green, 2004). Some common examples include: Matt. 10:28, "Do not fear those who kill the body, but cannot kill the soul;" or 1 Thess. 5:23, "May the God of peace sanctify you entirely, and may your spirit and soul and body be kept blameless…" (my translations). Additionally, Paul's emphasis on spiritual well-being is taken to mean at the expense of physical well-being in 1 Tim. 4:8, "For physical training is of some value, but godliness has value for all things, holding promise for the present life and the life to come" (my translation). 2 Cor. 5:2-3 is also cited as support for a dualistic theological anthropology, as it states, "For in this tent we groan, longing to be clothed with our heavenly dwelling, if indeed when we have taken it off we will not be found naked" (my translations).[31]

[31] Joel Green, Professor of New Testament Interpretation at Fuller Theological Seminary, makes a similar case, citing some of the same passages in his edited text, *Whatever happened to the Soul? Neuroscience and Christian Anthropology* (Abingdon Press, 2004).

At first glance, these texts appear to reinforce a clear dualistic construction of human persons. However, recent biblical scholarship has revisited these passages (and others) and illustrated that there are other ways of readings these texts (Green, 2004). For instance, the previous passage in 2 Cor. 5 can be read as part of Paul's larger argument about the frailty and suffering of human life as Paul tried to encourage Christians to remain faithful even in suffering. As Paul suffered while "clothed" in Christ via his baptism, so too might other Christians suffer even while remaining faithful, yet ultimately both Paul and others anticipate Christ creating all things new in his second coming (Green, 2004, p. 172). Consequently, the duality is eschatological (already-not yet), not anthropological (mind/soul-body) (Green, 2004, p. 172).

Additionally, the resurrection of the body in 1 Corinthians 15 wherein there is continuity between the here-and-now embodied life and the awaited eternal life with a new "heavenly body" is significant. Of course, the earthly body is marked with frailty and finitude, and thus not suited for eternal life, but there is still an emphasis on a bodily resurrection as part of humanity's eternal existence. Thus, the question becomes why would Paul emphasize resurrected embodiment so clearly if the physical embodiment did not matter? Would he not simply discuss the eternal destination of the soul? Obviously, I ask this question because I think he would not mention the bodily resurrection if the body was not important. Moreover, this account is but one of many Pauline texts that are often misunderstood and so I must revisit a few of them briefly.

Pauline Writings

Cursory readings of the Apostle Paul have led to sharply contrasting the term *sarx* (flesh) with the term *pneuma* (spirit), and associating the former with law, sin, and death and the latter with life in the new creation of God's reign. Thus, while a thin or flat reading might imply that such

Cartesian dualism is "Christian" – that those in Christ are called to renounce the old, sinful bodily life and embrace the new, redeemed spiritual life – a closer, more critical reading reveals that Paul was actually not implying this. Paul saw the body as part of God's good creation and the theater of God's redemptive activity and that "what is more important is the way the body is lived that leads him to speak so critically of the flesh" (Shulman & Volck, 2004, p. 47). Consequently, the main thrust of Paul's argument is not embodiment itself, but the particular way one embraces and enacts his or her embodiment. It is not the metaphysical, static construct that he calls into question, but the living, breathing, dynamic way we live in/out/through/with our embodiment that is of concern. In other words, do we live faithfully "in Christ" – seeking to emulate Christlikeness in our embodiment, or do we live unfaithfully not reflecting Christ? This is why Paul urges his audience to remember that their bodies (embodiment) are temples of the Holy Spirit and to offer them as "living sacrifices" to God (1 Cor.6:19-20; Rom. 12:1-2).

The misunderstanding of Paul's writings is most likely due to language limitations.[32] Ancient Greek (the language Paul was writing in) uses two different words to refer to human flesh – *sarx*, usually translated "flesh" and *soma*, usually translated as "body." Biblical Hebrew makes no distinction between these concepts while Greek does. Editors of the *Theological Dictionary of the New Testament: Abridged version*, Gerhard Kittel and Gerhard Freidrich (1985) explain how the confusion is easily plausible. They write:

[32] In their text, *Reclaiming the Body: Christians and the Faithful Use of Modern Medicine* (2006), Joel Shulman & Brian Volck cite *Theological Dictionary of the New Testament: Abridged*, (1985), edited by Gerhard Kittel & Gerhard Freidrich) to support the claim that limitations in Pauline vocabulary are what caused confusion. Kittel and Freidrich summarize how Paul was not implying faithfulness as a flight from the realm of the body with his use of the term *sarx* through examining Paul's usage of *sarx* throughout his writing and identifies five key assertions: (1) Humanity is qualified by the relation to God; (2) Salvation does not lie in a retreat from the physical to the spiritual; (3) Flesh is not a separate and intrinsically bad sphere but becomes bad only with orientation to it in either licentiousness or legalism; (4) The flesh as a wrong disposition away from God seems to become a controlling power; and (5) Salvation through Christ means liberation from earthly goals in a life that is lived as God's gift (p. 47).

> Hebrew had no special term for the body, and Greek-speaking Jews must choose between sarx and soma. Paul adopts soma as a term for our creaturlieness, for the place where we live, believe, and serve. For Paul, however, soma also means relationship with God and others rather than a self-contained individuality. If the community as Christ's body is a self-contained unit, it is so only in mutual service as the body of the crucified Lord. (p. 1148)

Additionally, in our efforts to rethink embodiment we must note one of the distinctive features of Christianity, the incarnation of Jesus Christ. It begs the question of *why*. In other words, what is the significance of God's choosing to enter, redeem, reconcile, liberate, and renew the world through becoming embodied and dwelling among humanity (John 1:14)? After all, other religions teach that gods take human form at various times, but none to the extent, or the utter "bodiliness" of Jesus (Shulman & Volck, 2004). I find it no coincidence that all of the gospels, even John, the "spiritualized" account, illustrate Jesus' physicality explicitly. Furthermore, Jesus' embodiment is apparent throughout his life and ministry pre-resurrection, but what is more profound is his bodily (embodied) resurrection – to the extent that he even reveals the scars to Thomas. All of this seems to clearly articulate the value of the human embodiment. Consequently, at minimum this reveals that our embodiment is worth not discarding; yet more likely this leads to entirely new ways of knowing oneself as a holistic, embodied intra/inter-related being. Christ did not come to set humanity free for minimum ways of living, but that we might have life in abundance; that we might not merely survive this life, but we might thrive – personally, corporately, and globally. In other words, our embodiment is not happenstance and serves an important purpose in our love and care of "self," and more importantly, in our love and care for our neighbor. Of course there is a danger of reductionism within embodiment – claiming that human personhood is comprised of nothing more than biological and neurological determinates, thus eliminating the immaterial and self-transcending

capacities of the soul altogether.[33] However, we not need swing the pendulum from one extreme to the other; we simply need to critically reflect on our constructions and revise and expand where necessary.

In short, what we see is a philosophical and theological dualistic legacy that shaped epistemologies in ways that impacts persons like Rev. Burke. If the mind/soul and body are not connected, or if the spiritual life is disembodied, what difference does it make if Rev. Burke had not eaten since breakfast the day he blew up at his daughter? Or why would it be important for him to know that his brain is literally located throughout his entire body via his central nervous system and his lack of physical activity and regular sleep were making it almost impossible to regulate and integrate key chemicals and process in his embodied brain? Or that prolonged stress and anxiety actually rewire his brain and neural networks to make the pathways for stress more readily available and thus the default processes in his experience (Ratey, 2001; Siegel, 2010)? My answer to these rhetorical questions should be clear: knowing and embracing the neuroscientific data is of vital importance and reconstructing our understandings of human persons is valuable. I believe that with the lenses and tools of neuroscience we can learn to be more aware and attuned to our intra-relationality. Furthermore, we can develop regular wellness practices that will rewire our brains in healthful ways making the neural pathways of integration, empathy, and compassion more readily available in our relationships with others. Though limited in this life, we can increase our capacity to love our neighbor as ourselves as we reflect on what "loving ourselves" means neuroscientifically and theologically.

[33] An excellent example of clarifying this point is Herb Anderson's chapter, "The Recovery of the Soul," (pp. 208-223), in Brian Childs and David Waanders edited text, *The Treasure of Earthen Vessels: Explorations in Theological Anthropology* (1994). Anderson not only recovers the soul for pastoral theology, care, and counseling; he also redefines it in non-dualistic terms and illustrates several important implications for pastoral care.

I am proposing a pastoral theological model of "wellness" based on a holistic, embodied, intra/inter-relationality to address this question. The wellness model includes the following areas: (1) attunement, (2) nourishment (physically, spiritually, intellectually and emotionally), (3) movement, (4) rest/renewal, and (5) relationships, and an integrative centralizing force of "embracing one's calling. I will unpack these concepts more fully in a later chapter, as well as explore how such practices can literally rewire the brain in healthful, life-giving ways, but for now I will simply highlight them as part of reclaiming the body for an embodied, holistic approach to wellness.

RE/CONSTRUCTING: TOWARDS A PASTORAL THEOLOGY OF WELLNESS

Naming and clarifying that we are embodied beings is a start; however, we must also address the telos of our embodiment – the ways in which we live out/in/through/with our bodies in light of our relatedness to other embodied human beings – as well as the ways we do not embody and enact Christ-likeness with other embodied beings. In fact, some have proposed that empathy is easier or a more readily available neural pathway for brains in persons who are similar and more challenging across lines of difference (Mathur et al., 2010; Hogue, 2010).[34] This appears to be a neuroscientific aspect to sin and system evil, which introduces a somewhat paradoxical aspect of being "well" in this embodied life: the impact and lived reality of sin, finitude, and vulnerability. In other words, the lexicon for "well-being" and "wholeness" must somehow account for the fact

[34] However, conversely the literature also illustrates how we can rewire our neural networks in healthful/life giving ways, which I believe will make empathic encounters more likely across lines of difference. One step in this direction is to learn how to utilize our brain's plasticity. Consequently, I propose using the concept of "wellness" in my pastoral theological construction of persons to describe how we embrace and enact our embodied personhood in just and life-giving ways.

that though persons strive for ways of living justly in relationships, structures and systems of oppression still plague humanity.

Sin and Systemic Evil

Negation of Relation

Simply noting humanity's relationality is not sufficient given the complex and power-laden distortions that have been constructed throughout the centuries. One must account for the current state of affairs. As mentioned, I use a Reformed, Christian theological perspective to constructive views of human health and wellness, thus I name the distortions and destructions of this world as *sin* and *systemic evil*.[35] I have been aided in this "truth telling" (Miller-McLemore, 2004) pursuit by Liberationist, feminist, and Womanist theologians, as well as voices from socially oppressed and marginalized groups. For instance, persons marginalized for the color of their skin, or their gender identity, or their sexual orientation have taught me that simple acknowledgments of interconnection are mere platitudes if the quality of the relations and power dynamics are not addressed.[36]

As a result, the common way of thinking about how persons are related has been redefined. Notions of *relational humanness* (Patton, 1983) have been critiqued and re-defined as *relational justice* (Graham, 1995) as persons are now seen as parts of a complex *living human web* (Miller-McLemore, 1993) of intra/inter-connectedness. Unfortunately, sin and systemic evil have allowed for constructions of relatedness to become oppressive as power is seen as

[35] The Reformed Church in America's denominational Creeds and Confessions also account for sin and systemic evil as part of the lived reality of being human. They include: *The Apostle's Creed, The Nicene Creed, The Athanasian Creed, The Belgic Confession, The Canons of Dordt,* and *the Hiedelberg Catechism*. These join Scripture and Tradition in the "rule of faith."

[36] There are really too many to list over the last twenty years, but some that I am familiar with are (Smith Jr., 1982; Wimberly, 1990, 1997, 2006; Patton, 1993; Miller-McLemore, 1993; Poling, 1996; Graham, 1997;; Marshall 1997; Gill-Austern, 1999, Gorsuch, 2001; Neuger 2001; Greider, 2002; Lee 2002; Lartey 2003, 2006; Ramsay, 2004; and Doehring 2006).

over/against rather than *power-with* models of relating. Too often such dynamics leave minority groups on the underside of those hierarchies. Thus, pastoral theologians must continue to reconstruct more just and life-giving relational structures.

A helpful model or metaphor for naming these destructive structures is "negation of relation" (see chapter one, Matsuoka, 1998). This way of framing sin and systemic evil was introduced by Japanese-American theologian and now professor emeritus, Fumitaka Matsuoka. Matsuoka names these as such because sin and system evil seek to divide human persons and tear down community in the text, *The Color of Faith*, (1998). The negation replaces love and acceptance with fear and hatred, objectifying the other as "other" and normalizing the "I" (Ramsay, 2010).[37] Another, often overlooked layer to the negation of relation is the role privilege and power plays in maintaining systems and structures of oppression (Ramsay, 2002). Those of us in the dominant cultural groups often overlook and/or deny our complicity because we rationalize that are not actively "oppressing" anyone personally. However, we must not forget that our silence ignores the systemic advantages awarded to us simply because of our position in the dominant group, and thus wittingly or unwittingly we work to uphold the structures of domination that marginalize certain forms of embodied existence (Ramsay, 2002; 2010). Thus, whether we name it or not our silence is sinful and we must acknowledge our complicity. The tragic result of this negation is that we "lie" to ourselves and cannot see the ways in which we harm others, thus denying the humanity of the other and our reducing our own humanity (Ramsay, 2002).

I appreciate the powerful concept of "negation of relation" and choose to name such tragic expressions as a distortion of God's original intention. I also appreciate the work of the

[37] In fact, some neuroscientists note that our brains are more capable of empathy with persons within our own ethnicity (Houge, 2010). I mention this not to excuse the sin, but to expose the sin of caution and fear towards those who are different. It also reveals the challenge of engaging the other empathically and justly.

numerous pastoral theologians who have, and continue, to "tell the truth" and call forth more just and liberative ways of relating with one another. Yet, in this study I want to highlight an aspect of negation of relation that needs more attention – the negation of one's intra-relation with oneself.

I also believe that persons can experience the "negation" within themselves (as we saw in the opening scenario of Rev. Burke). Therefore, I want to extend the notion of "negation of relation" to include our relatedness to ourselves in this project – particularly the various layers and aspects of our entire embodied existence. I call this our intra-relationality/intra-connectedness and want to highlight how we become alienated from aspects of our selves – most specifically, our bodily self. We often are not "in tune" or "attuned" (in neuroscientific terms) with our embodied experience and thus do not know how to listen for or to the wisdom of our embodiment. For instance, we are often taught to deny our "bodily" sensations, suppress our emotions and ignore our intuition as these sources of knowledge cannot be trusted like our "rational" minds. Yet, how many of us "just knew" something because we had a "gut sense" about it? Or how many of us sensed God's voice speaking to us via our intuition? Or how many of us would find it helpful to know that our brains produce and secrete the very chemical compounds that pharmaceutical companies produce artificially in antidepressants when we participate in aerobic exercise[38] (Ratey, 2008)? Or that our routine habits and practices actually reshape the structure and processes of our brains from the moment we are born until the day we die? Or that when our embodied brain ecosystem is out of balance, our ability to construct meaning, identity, and provide care for others is hindered? I imagine most of us would find this information helpful.

[38] The chemicals are dopamine, norepinephrine, endorphins, serotonin, and "gamma aminobutyic acid" (GABA) (Howard, 2006). The pharmaceutical companies call them "selective serotonin reuptake inhibitors" (SSRIs) and use them to treat depression, anxiety disorders and personality disorders (Howard, 2006).

In neuroscientific terms the impact of the sin of "negation of relation" is that our brains/minds[39] become dis-regulated and dis-integrated and often lead to the extremes of chaos or rigidity (Siegel, 2010). When in an extreme state our brains/minds are less able to control our emotions and responses and less flexible and adaptive – we often get "stuck" in harmful and/or negative patterns of reactivity. For instance, when we get upset like Rev. Burke did our inner/lower layers of the brain – the brainstem, central nervous system, and limbic regions – send information and energy racing through our system informing us to be on guard and ready to act to protect ourselves if necessary. This is our fight-flight-freeze response and it is helpful in times of acute stress or danger. Before we realize it our "embodied brain ecosystem" speeds up and prepares for action. This is can be life saving in dangerous situations. However, most times we do not find ourselves in life or death situations and the outer/higher layers of the brain – the cortex and prefrontal cortex – will receive this information and energy, and interpret and evaluate it, and slow down the arousal process and calm/sooth us (Siegel, 2010). When our brains are regulated and integrated, this process occurs seamlessly and the response fits the situation. However, when our brains are not regulated or integrated, these processes break down and we tend to over-react unexpectedly, get stuck in a particular pattern and/or "lose our minds" (Siegel, 2010, p. 25-26). In each case, the neural networks of the brain misfire and we, and others, suffer the consequences of "negation of relation."

To help explain regulation and integration most neuroscientists use a mathematical concept – complexity theory – to describe how the brain works because our brains function as a dynamic and complex system. According to complexity theory, the brain/mind is made up of many different elements that communicate with one another internally, but also with outside

[39] I will say more about the brain/mind in the next chapter, but for now it is important to note that the brain and mind are different, yet dynamically interconnected. The brain is the physiological structures and processes, while the mind extends beyond the brain in our meaning making and relational processes.

input. Thus, it is considered "open" – open and receptive to input from the outside in a seemingly limitless fashion. As such it is vulnerable to becoming chaotic. Another important aspect of a complex system is that it is a self-regulating system that regulates its own emergence from the interactions/communication of the elements which make up the system (Siegel, 2010). Neuroscientist, professor, author, and director of the Mindsight Institute at UCLA, Daniel Seigel, M.D., explains complexity theory using a common cloud as an example (*Mindsight*, 2010). Siegel explains that just as a cloud – a collection of water molecules capable of random distribution as it receives light and energy from outside itself – organizes, changes shape and then dissipates, so too the brain/mind is a constellation of different elements (within persons and between persons), which organize, regulate, and even predict/anticipate the future as it makes meaning of experience (p. 68). If the water molecules were too rigid/static, or too chaotic to be formed into a pattern, a cloud could not exist. The same is true for the human brain/mind. There must be what I call "dynamic integration" or a certain balance of what Siegel calls FACES – flexibility, adaptability, coherence, energy, and stability – for healthful functioning (Siegel, 2010). Within dynamic integration there are a number of elements that address how the embodied brain ecosystem balances the two extremes of rigidity and chaos and how persons make sense out of experience. I will address these in the next two chapters as I explore the neuroscientific lens more fully, but for now I simply want to highlight why regulation and integration are so important.

After all, we saw the consequences of dis-regulation and dis-integration in the encounter with Rev. Burke and his daughter. If an encounter like this is a one-time event, repair and healing is quick and fairly easy. However, if dis-regulation and dis-integration become chronic conditions, the damage done – to others and self – is exceedingly greater and the path towards

healing and repair becomes much more difficult. Additionally, as one participant illustrated in chapter one, in a state of disconnection intra-relationally we often lose a meaningful part of relationality with God. Persons also tend to limit "spiritual" practices to include a select few approved ones – prayer, bible study, theological reflection, and so on, at the expense of others like meditation, self-reflection, body scan focused attention, physical activity, and exercise. One participant touched on this when she reflected about what she was taking away from the experience of this program. She stated, "One positive thing was seeing 'rest and renewal' lifted up as important – I need permission and I am trying to remember that." It appears from her response that prior to this program she did not consider rest and renewal as a vital part of her wellness. Without rest and renewal there is the potential to miss out on some of the "abundant living" to which Christ calls us. Consequently, it is vital that pastoral caregivers and persons in general, learn how to aid the regulation and integration processes in their brains and not negate the relatedness of their intra-connection.

Internalization of Stigma[40]

The internalization of stigma is another powerful aspect of the "negation of relation," as it names the public/political implications of the breakdown of relationship – both intra-personally and inter-personally. When aspects of personal and social identity such as gender, race, class, or sexual orientation are marginalized and/or oppressed by the dominant groups individuals who identify with such forms of marginalization will frequently internalize a related sense of stigma

[40] As I note issues of difference, I realize the dangers of essentialism and want to highlight that each person's experience is idiosyncratic and multilayered. Yet, as Christie Neuger illustrates in a chapter on power and difference in pastoral theology (in Ramsay, 2004, pp. 65-86), it is important to not lose the potential benefits of solidarity in shared experience because this makes political and social change possible. Consequently, as I highlight some elements of difference, I acknowledge there are many other layers and complexities that are not identified and explored in their entirety.

and develop a diminished sense of self. One example of this is racism. Ed Wimberly, pastoral theologian, professor, and author of numerous books on African American pastoral care and counseling names how racism "recruits" many African American persons into "negative self-images, identities, and stories" of self, which leads to the "internalization of oppression and psychic bondage" (Wimberly, 2006, p. 11). This process occurs as African American persons see their own economic and social well-being diminishing in relation to other racial groups (particularly whites), their unemployment rate remain twice as high as whites, and the disproportionate amount of homicides, diseases, and illnesses among African Americans (p. 19). One could add the disproportionate amount of African American men being incarcerated to this list as well. Wimberly points out that the most damaging aspect of this process is the undermining of self-awareness (p. 85).[41] If one is not connected/connecting, or attuning with self, he or she is at risk for internalizing a negative sense of self.

Feminist and Womanist pastoral theologians have also explored how internalization of stigma plays out for persons on the underside of cultural power. For instance, in her text, *Counseling Women: A narrative, pastoral approach* (Fortress Press, 2001), Christie Neuger names how the problems that many women bring to pastoral counseling are complicated by gender training, gender oppression, and the dynamics of racism, classism, heterosexism, and ableism. She encourages pastoral caregivers to be versed in how to expose cultural biases and distortions that subjugate women and other persons who are "othered" by dominant discourses (2001, p. ix). In short, pastoral caregivers must be able to deconstruct oppressive structures and norms and reconstruct more liberative, life-giving practices of care based on "empowerment,

[41] Emmanuel Lartey uses a global perspective to illustrate how persons from numerous locations, particularly Africa, Asia, Central and South America, and Europe, are at risk for similar processes of internalization in the face of cultural imperialism, exploitation, and other forms of oppression (Lartey 2003; 2004; 2006). Again, the consequences of marginalization and oppression can be extremely damaging to the sense of self-identity.

justice, grace, and interdependency" (p. x). Likewise, Teresa Snorton utilizes Patricia Hill Collins' typology to name how African American women are often marginalized in to one of only four acceptable roles – the nurturing loving type (Mammy), an angry, dominant figure (Matriarch), the Welfare Mother, or Jezebel (Particia Hill Collins, 2000; Snorton, 1996). In such cases of marginalization and oppression, the potential neurobiological consequence is not only the current pain of stigma, but the ongoing rewiring of the embodied brain which occurs through repeated practice and experience. In other words, in internalizing stigma the embodied brain ecosystem is learning and adapting to equate "self" with diminished, de-valued/lesser-than constructions and this often impacts persons' capacity to connect with others.[42]

In addition to gender and race, there are other areas of stigma that must not be overlooked. I cannot attend to each one, but want to highlight one that is important to me – disability. I know the pain of disability most profoundly through the disease of Muscular Dystrophy (MD).[43] MD is a muscle degenerative condition which slowly eats away muscle tissue and erodes the body's physical capabilities. Each of my siblings has MD, and it has progressively limited their physical ability and mobility throughout their lives. They once could run and jump and move freely, but now they require assistance for basic tasks such as standing out of a chair or dressing themselves. Clearly, their physical embodiment would not fit the

[42] The neuroscientific literature is also exploring questions of difference in brain wiring and chemistry (Baron-Cohen, 2004; Mathur et al., 2010; Hogue, 2010). Some researchers are exploring why women on average appear to be able to empathize easier than men on average (Baron-Cohen, 2004). Others are examining why empathy appears to be more difficult with persons who are different from one another and occurs more easily with persons who are similar (Mathur et al., 2010). I think the more pressing question for pastoral theologians is how these differences are impacted by power-laden socially constructed norms, rules, and roles, and how we might use critical analysis to examine not just the empirical "evidence," but what factors might bias or skew the evidence. In turn, we will be more equipped to work for contextually aware liberative and life-giving practices of pastoral caregiving in light of our differences.

[43] Additionally, my father has been battling chronic, debilitating, pain for over 12 years to the extent that he was forced to step away from ministry and enter "long term disability" towards retirement much too early.

normative definition of health in our culture; yet, I have learned to see how they are "well" in ways that other able-bodied persons may not be.

In light of this experience, I want to lift up a central tension in our constructions of wholeness and wellness, and argue for more nuanced understandings. There is an important difference between the fluid and dynamic constructions of the embodied "wellness" I am proposing and the dominant cultural attitudes that "place inordinate value on unrealistic ideals of autonomy, independence, productivity, health, and beauty, and that view illness, suffering, and death as meaningless affronts to human dignity" (Toombs, 2006, p. 127). S. Kay Toombs, a teacher and author who has the neurological disease Multiple Sclerosis (MS) makes this point in her work as well. Toombs clarifies that we falsely equate health with complete absence of disease and freedom from *any* physical or mental limitation. Moreover, she notes that we spend tremendous amounts of time, energy and money in the pursuit of an illusory state of perfect physical "wholeness" (Toombs, 2006). The point that I want to emphasize is that examples such as Toombs and my siblings teach us that we must not, and cannot, assume normative and prescriptive definitions of "health" and "wellness;" rather we must continue to nuance our constructions of wellness contextually. Both Toombs and my siblings are healthy and "well" despite having a disease. And those seeking pastoral care can be "well" even in the midst of pain and dis-ease. In addition, those providing care can be "well" in the midst their own struggles.

One of the participants in this project names this nicely in her response to my question about her theory of wellness. When I asked her what her working definition of wellness was, she stated:

> I think there are persons who are deeply well, who are also in some measure broken. I am heartbroken and yet I can say, "It is well with my soul" – meaning: I sense that I am cared for in my brokenness; I sense that I am healing; [and] I sense that I am at peace, though I am sad.

Each of these examples and my own experience also names a profound paradox of reclaiming embodiment as vital for human beings – that the human body, and all that is part of it (i.e. the brain), is absolutely vital to our wellness; yet, it is not the entirety of personhood. Rather, human beings are ones with the capacity for self-transcendence and inherently interdependent in relationality, with self, God, others, and the world. While I am advocating for reclaiming embodiment, we must not conflate embodiment with a purely isolated physical entity, nor dichotomize the boundaries between internal and external. In other words, the body/embodiment is both the "author and the page." Meaning it is constructed narratively and socially. Persons act as both subject and object in making sense of and meaning in life (Frank, 1998; Martin, 1994; Young, 1990b; Hogue, 2003; Lester, 1995, 2003).

Taken together, the lived realities of sin, systemic evil, and stigma, as well as finitude vulnerability shape the way I view health, illness, wholeness, and why I choose to use the term "wellness" as a metaphor. As described in chapter two, I believe this offers a more critically aware and reflective understanding of the nuances of lived experience in light of difference(s). Moreover, I believe that this more accurately reflects the creative diversity of God and God kin-dom[44] as we seek to live our call to love our neighbor, who is different from us, as ourselves.

[44] This is a term I borrow from other pastoral theologians for its more just, equitable, and peaceful model of relation as opposed to the more hierarchical and militaristic "kingdom."

SUMMARY

In this chapter, I have presented a pastoral theological construction of embodied personhood, which reclaims the goodness, normativity, and complexity of human embodiment. I have done so through deconstructing the dualism which informed the normative interpretations of Scripture through the modern era, as well as standard definitions of health and wholeness, and reconstructing a more complex, nuanced, and critically reflective pastoral theology of "wellness." It is one that seeks to account for the particularities of situation and context, and takes embodied experience seriously. Moreover, it is one that will impact and re/shape our practices of pastoral caregiving with others and care of self.

In the next chapter, I will turn to specifically addressing the brain itself, exploring its structures and functions in presenting how and why I believe a neuroscientific lens offers a helpful way of organizing our very complex and dynamic embodied brain ecosystems. We will explore how this could help us in our capacities for genuine empathic encounters – both intra-relationally and inter-relationally.

CHAPTER FOUR: NEUROSCIENCE – THE ORGANIZING SYSTEM FOR EXPERIENCE AND MEANING MAKING

In the last chapter the scenario with Rev. Burke and his daughter illustrated the importance of attunement with one's embodied self and the ability to regulate and integrate one's experience in both "top-down" (originating the in prefrontal cortex and moving down through the limbic region, brainstem, and into the central nervous system) and "bottom-up" (originating the central nervous system and flowing upward through the brain stem, limbic region, and into the prefrontal cortex) directions of the brain-behavior relationship. It was clear that a neurological framework of Rev. Burke's experience aided his self-understanding as he reflected, "I see now when I'm more rested I'm able to provide better care for my family." I believe there are many other pastors and pastoral caregivers who can benefit from a neurologically informed view of human personhood.

In order to articulate the usefulness of neuroscience as a necessary conversation partner for constructing a pastoral theology of wellness, a brief overview of the brain, its key components, and its functionality is necessary. The embodied brain is a complex ecosystem of communication comprised of firings and writings throughout one's cortex, midbrain, brain stem, and central and peripheral nervous systems (Ratey, 2001; Howard, 2006; Siegel, 2010). In short, the brain is located literally throughout the entire body. I will describe this ecosystem in more

depth below, but I want to highlight a very exciting recent discovery in neuroscience – neuroplasticity.

Neuroplasticity is the way neuroscientists describe the brain's dynamic malleability, or "plastic" quality. The brain is considered plastic because it changes (in structure and function) every second of every day as a result of our experiences – thoughts, emotions, actions, and so on (Ratey, 2001; LeDoux, 2002; Howard, 2006; Siegel, 2010). Neuroplasticity is the science that encourages persons to incorporate brain fitness exercises into their daily lives such as Sudoku and crossword puzzles to stave off dementia and Alzheimer's disease. In this study, I add emphasis to the embodied quality of what brain fitness involves and include all the layers and aspects our embodied, intra/inter-connected self. The most exciting aspect of neuroplasticity is that, while genes or biological makeup is important, it is not deterministic and we do have the ability, and responsibility, to shape our brains in life-giving ways. Our practices and experiences have the power reshape and rewire our brains, and our identities. I will explain this in more depth below. For now, the main point is that brain function and behavior mutually inform one another in a two-way process. In other words, "dynamic changes in the brain most likely reflect a concomitant change in behavior, cognition, or emotion" (Barth, 2001). What this means for a pastoral theology of wellness is that regular wellness practices (behavior) have the potential to change the structure and function of the brain. Used in healthful and life-giving ways, plasticity can rewire the brain to be more aware, receptive, and empathic in encounters of pastoral care and counseling situations. Put simply, plasticity has the potential to aid one's effort in following the great commandment of the Christian faith to love God, love one's neighbor, and love oneself.

Narrowing the Scope: Locating Wellness within Neuroscience

Given the immense breadth of the field of neuroscience, presenting more than a brief overview is beyond the scope of this project. The field of neuroscience has been described as a four legged chair wherein "one leg represents neuroanatomical research (morphological study of the brain), another, neurophysiological research (the study of the electrical properties of the brain), a third, neuropharmacological research (the study of brain chemistry), and the fourth leg, neurobehavioral research (the study of brain-behavior relationships) (Dr. Steve Wise in Barth, 2001). Moreover, the fourth leg of the chair, neurobehavioral research, consists of two disciplines: physiological psychology and neuropsychology. Therefore, I must limit my engagement of the literature to the areas which highlight a holistic, embodied quality of the brain and the paradigm of neural plasticity. As I turn to the neuroscientific literature, there are a few cautions that must be noted.

First, while the brain has different regions and parts that tend to be responsible for particular functions and processes of living, it works more like a complex ecosystem than a computer (Ratey, 2001). Input does not always lead to a direct and predictable output. What this means is that while it is helpful to know the different structures and areas that are responsible for certain functions, the brain does not always perform the function in the same way. For instance, the occipital lobe in the cortex is known as the "visual processing center" and is responsible for sight. However, the occipital lobe will also be in communication with all the other regions of brain (including the bodily regions: such as the central nervous system) in its process of producing an intelligible and meaningful image. Thus, no two persons' neural firing patterns will be exactly the same since each experience is given idiosyncratic meaning based upon a whole host of factors – not simply in comparison to other brains, but within the same brain. For

example, there is data that suggest that the neural firing patterns of the visual cortex in cats will alter in relation to the motivational regions of the hypothalamus (Barth, 2001). In other words, if the cat is hungry the neural firing pattern will be one way, but if that same cat is satiated, then the neural firing pattern will change.

The flexibility or plasticity in the brain can be interpreted in at least two ways. On one hand, it implies that it is impossible to predict the neural firing pattern at any specified moment given the number of variables involved, and is thus overwhelming and useless. On the other hand, it implies that there is always a possibility and potential that something novel will occur, and is thus exciting and empowering. I take the latter approach. The exciting and empowering piece of plasticity is that there is always the possibility of change, of a new neural firing patterning developing, and of the person living into a different future. Rev. Burke illustrated this in his post-program reflection as he shared, "I'm more mindful of how I communicate to my family. That has changed. My spouse and kids…significantly. It has been really wonderful. I mean that is the best part."

A second caution to keep in mind is the scope and plasticity of the field itself. Over the last 20 years there has been tremendous, paradigm shifting discovery in neuroscience. Neuroscientists continue to reshape the landscape of the field as older understandings give way to new ones in light of technological developments and new and different research methodologies; therefore, I understand that my exploration into how the brain works will be partial and incomplete, thus any conclusions must be taken in light of this fact. I believe this research is a step in a much longer and thorough process of engaging neuroscience and pastoral theology.

A third caution to take into account is the relationship between the brain and the mind. This is one of the most intriguing and difficult questions in neuroscience. On one hand, neuroscience has made it possible to observe and study the actual physiological structures and electrochemical processes of the brain using fMRI (functional magnetic resonance imaging) and PET (positron emission tomography) technology. In such studies, neuroscientific researchers can literally see the structures of brain "light up" and can map neural firing patterns. This has led to greater precision in understanding the brain processes in thought, emotion, behavior, and even religious experiences such as prayer and meditation. Yet, on the other hand, the entirety of human experience simply cannot be reduced to electrochemical firing patterns. No two brains will react in the same way or in the same pattern as one creates meaning out of his or her lived experience. In other words, while the brain and mind are inexorably linked, the self-reflective quality of the "mind" is somehow different than the "brain." Daniel Siegel has written about this distinction in each of his works and notes that the mind is embodied, relational, self-aware, and interprets and "regulates the flow of energy and information within and between brains" (Siegel, 2010, p. 52). Siegel is pushing the boundaries of the field of neuroscience and is considered controversial amongst many of his peers, yet from a pastoral theological perspective he appears to be blurring the lines between the disciplines in helpful ways.

The self-reflective quality or distinction between the brain and mind is what some persons of faith – particularly the Christian faith – refer to as the "soul" or "spirit" of personhood. An in-depth discussion on whether "soul," or "spirit," or "mind" is the best way to depict the self-reflective capacity of persons is beyond the scope of this study. For my purposes, I want to emphasize the point that regardless of the term used to describe it, the important aspect is that the brain architecture is significant, but not deterministic. Consequently, the best way to

understand how the brain-mind-soul/spirit (and body) functions is via an embodied, interactionist (internally and externally), and systemic model. Creating an internal world of meaning involves the whole of one's embodied brain and all of the intra/inter-connected aspects of one's relational self, which influence and are influenced by a very complex, dynamic, and yet integrated process with the external world. In short, everything about human beings and our ability to maintain life – from the unconscious basic functions of the central nervous system to the advanced, conscious functions of prefrontal cortex – is mediated via the *embodied brain ecosystem*.

A final note before moving into neuroscience specifically: acknowledging the immense complexity and plasticity of the brain is not meant to be discouraging. In fact, just the opposite; it is good news. What neural plasticity means for persons is that regardless of the current situation, no one is "stuck" in whatever firing pattern may be problematic or troubling – to them and/or to others. The brain is so dynamic and plastic that there is always potential to reshape the structure and firing patterns of the neural networks, however minimal the chances may be. This is not meant to discount the importance of psychotherapy and psychotropic medications, but to highlight the role regular practices of wellness play in healing and neuroplasticity.

I say this because I believe I witnessed plasticity in the participants of this study as they took part in the pastoral wellness program. One participant – I will call her Rev. Alex Jones – reflected on what she sensed had changed as a result of her participation. She stated:

> I mean it was nice at the end of the day [to think], "Oh, I get to give myself a few kudos for actually sitting down and reading a few chapters in my novel." I think that's a good thing…I'm gonna try to work harder to get some more rest because I do a better job when I'm rested, and I have better attitude and am better able to handle stress when I'm rested.

Rev. Jones had developed a new sense of the importance for her own self-care; a new sense of her identity through practices of wellness. Based on her self-report scores, she increased her

Sabbath taking by 20%, increased her satisfaction in her relationship with her husband by 20%, increased her spiritual nourishment by 20%, and decreased her level of stress and anxiety by 10% in 6 weeks. I believe if I had the ability to conduct brain imaging scans in addition to the research interviews and participant self-reports there would be visible changes in Rev. Jones' neural firing patterns. This is neural plasticity.

BRAIN BASICS – HARMONY IN COMPLEXITY: THE STRUCTURES AND FUNCTIONALITY OF THE BRAIN

The amount of information on the brain is immense. Since Congress declared the 1990s the "decade of the brain," there has been a tremendous amount of interest, research, and literature produced. There are so many potential entry points and avenues within neuroscience it would not be feasible or helpful for me to try and attend to every aspect of the field in this project. Consequently, I find the neuroscientists who argue for an embodied, holistic model of the brain; as well as those who emphasize the brain-behavior/behavior-brain relationship illuminating for my work. Given these parameters, two neuroscientists in particular have been helpful in my research – Dr. John Ratey, M.D., associate clinical professor of psychiatry at Harvard Medical School, and Dr. Daniel Siegel, M.D., clinical professor of psychiatry at the UCLA School of Medicine, and executive director of the Mindsight Institute.[45]

In this section, I will provide a brief overview of the key structures and functionality of the brain as they inform neural plasticity and my working theory of wellness as a pastoral

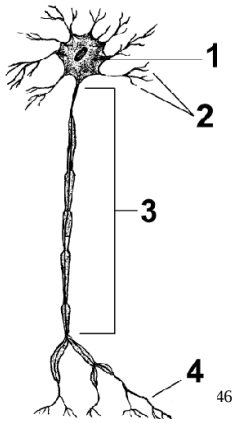
[45] I realize that within the neuroscientific community, as with most intellectual fields, there are numerous viewpoints – many which conflict and contradict one another – as well as the few outliers which are generally not supported by the larger field as a whole. Therefore, I do not assume to speak for all neuroscientists, yet have been careful to remain within the accepted range of possibilities according to the peer process of the neuroscience community.

theologian. In providing this overview, I will first identify the main aspects of the brain's anatomy and architecture; then I will turn to discussing how the brain functions as an intra/inter-connected, embodied ecosystem; and thirdly I will argue for a model of wellness that highlights regular practices of wellness as vital resources in one's ability to attune with self and connect empathically with the other.

Brain Structures

The human brain is arguably the most complex object/system in the universe. Often compared to an overgrown jungle, the brain is comprised of roughly one hundred billion neurons and nearly ten times as many other brain cells in a vast web of communication (Ratey, 2001, p. 9). Each brain cell (neuron) is connected to other neurons by treelike projections known as *axons* and *dendrites*, which branch out and end in tiny structures called *synapses* (Ratey, 2001; LeDoux, 2002; Howard, 2006). Axons and dendrites are like the fiber optic channels that run our massive communication infrastructures in the 21century (see fig 4.1).

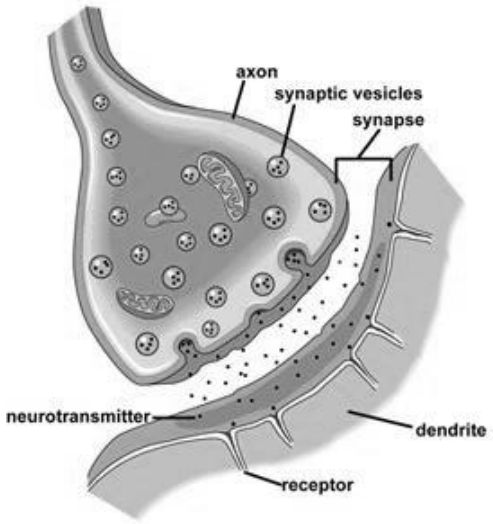
Fig. 4.1 Neuron: 1 – cell body, 2 – dendrite, 3 – axon, 4 – nerve ending



[46]

[46] Figure 4.1 Components of a neuron. Image taken from http://www.merriam-webster.com/art/med/neuron1.htm (accessed 8/7/2012).

The dendrites are the main way that neurons receive information; and axons are the main way neurons pass on information (Ratey, 2001). These connections guide and shape everything about us on unconscious and conscious levels – our basic living functions, behaviors, thoughts, sensations, ability to relate with others, and our constructions of "self" (LeDoux, 2002). And every thought, action, and experience we have continually modifies the firing patterns or flow of communication (Ratey, 2001). What is even more fascinating is that all of this communication occurs without the neurons ever touching one another. Messages pass across tiny "synaptic gaps" between neurons mediated via chemical firing as an electrical signal is transformed into a chemical one and sent from the axon to the dendrite across the synaptic gap (Ratey, 2001; Howard, 2006) (see fig 4.2 below).



[47]

Another layer of complexity is that each one of the brain's hundred billion neurons may have anywhere from 1 to 10,000 synaptic connections to other neurons (Ratey, 2001). Add to this that the synaptic connections between neurons occur at different strengths and efficiencies –

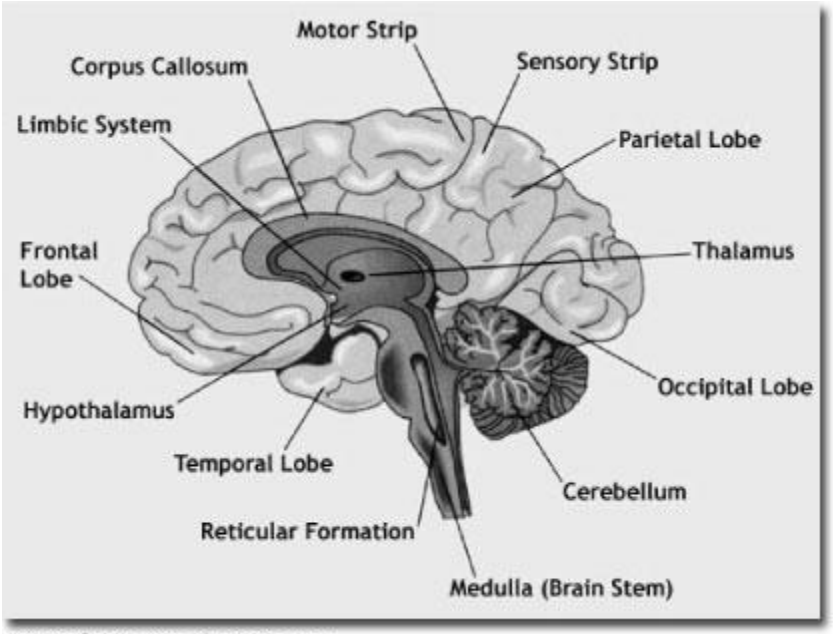
[47] Figure 4.2 The synaptic gap. Image taken from http://www.mindtools.com.au (accessed 8/16/12).

meaning certain patterns and connections become more readily available or easier than others[48] – and the result is extreme complexity. Neuroscientists admit that the total number of different patterns of connections is staggering and impossible to quantify empirically. Nevertheless, they do offer a theoretical number to give us an idea of how complex (and amazing) our brains really are. The theoretical number of possible connections within a single human brain is approximately 40,000,000,000,000,000 – forty quadrillion (Ratey, 2001, p. 9). Yet, this is not the final number. If we add to this the number of possible electrochemical configurations to the firing patterns, the number becomes ten to the trillionth power – a number so large we really cannot comprehend it (Ratey, 2001, p. 11). To illustrate just how large this actually is, one neuroscientist provided an example by calculating the volume of the known universe in cubic meters. Its volume: ten to the eighty-seventh power (Ratey, 2001, p. 11). The difference between these two numbers is itself too vast to comprehend.

As if the description above was not complex enough, the final and most exciting piece of the puzzle is the previously named plastic quality to all of the above. What this means is that each of the firing and wiring patterns mentioned above is in constant flux, thus each experience that we have changes the strength, structure, and function of the firing and wiring pattern of neurons. What I find most amazing to all of this complexity is that our brains usually work in such refined harmony that we hardly notice any of this occurring as we go about our daily lives.

[48] An example may help. Imagine charting a path through an overgrown grassy field. The first time you walk through the field it will be difficult as you create the pathway; however as you travel this path over and over it becomes "well worn" and easier and easier to get through. Over time you know the path so well you do not even need to think about your next step, you simply take it. This is exactly what our brains do – the firings happen so often, they often occur at an unconscious level. Neuroscientists often say the brain that "fires together wires together" to describe this processes of neuroplasticity (Ratey, 2001; LeDoux, 2002; Siegel, 2010).

Brain Anatomy



[49]

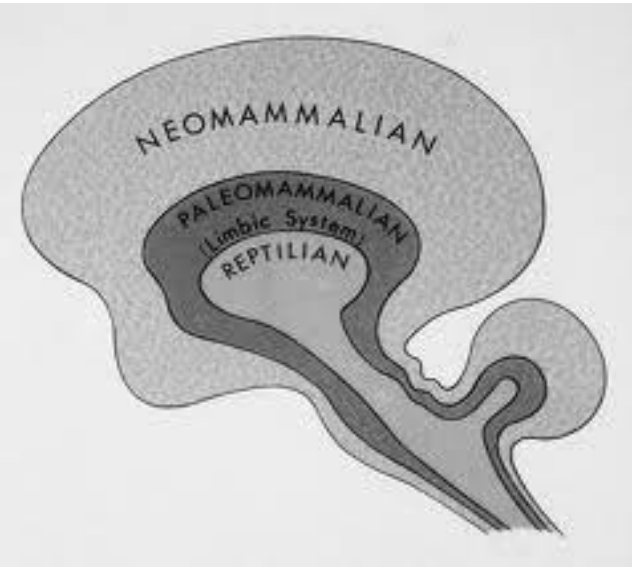
The brain is made up of three main regions – the brain stem, the limbic system, and the cortex (the large region with all the folds) – which evolved over time from the bottom up, and is divided into left and right hemispheres. Though we know that the brain works idiosyncratically in each person, it is helpful to breakdown the different parts of the brain and explore how they communicate with one another. Thus, I will briefly explore each region and the hemispheres, but want to reinforce that it is for illustrative and not deterministic purposes. What this means is that two persons, with similar brain structures could experience the exact same stimuli or event, but respond in very different ways depending on a whole host of factors. For instance, think about how siblings can grow up in the very same households, with very similar genetic makeup, and yet become entirely different people. This is no surprise neurologically.

[49] Fig. 4.3 Brief Brain Anatomy. Image taken from http://human-anatomy-the-brain.anatomyandphysiologyss.com/human-anatomy-the-brain/ (accessed 8/7/2012).

One helpful framework for exploring the brain is to trace its development and evolution over the years. One neuroscientist, Paul MacLean did precisely this and introduced a new way of thinking about the brain. I use this framework, not to debate the merits of evolutionary theory (of which there are many), but to provide a way to think about how the brain functions in both top-down and bottom-up directions, as well as emphasize our connectedness to the entire created order.

Triune Brain

Neuroscientist Paul MacLean introduced a new way of thinking about the human brain in 1967 (Ratey, 2001; Hogue, 2003; Siegel, 2010). He used Darwinian evolutionary theory to note how the structures, functions and capacities of the brain evolved over time. Given the number of regions in the brain's evolutionary development, Mac Lean called it "the triune brain."



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Later neuroscientists clarified MacLean's theory, noting that as each new region developed it did not replace the previous one, but allowed the brain more complex functions and processes and

[50] Fig 4.4 The Triune Brain. Image taken from http://www.phe.rockefeller.edu, (accessed 8/7/2012).

was integrated into part of the new brain. Some neuroscientists refer to this as "exaptation" (Cozolino, 2010, p. 6). The three regions in order of development are: (1) the reptilian brain (brainstem), (2) the paleomammalian brain (limbic system), and (3) the neomammalian brain (cortex/neocortex/prefrontal cortex). I will briefly explore each one to note key functions and how they shape and work together in the contemporary human brain.

Brain Stem

The reptilian brain likely developed hundreds of millions of years ago and is where the brain receives input from the body and sends input back down to regulate the basic processes for living, such as the functioning of the heart and lungs, sleep and waking, respiration, temperature regulation, basic automatic movements, and our states of arousal (Ratey, 2001, p. 10; Siegel, 2010). The brainstem is also the region responsible for our rapid/unconscious responses or mobilizations of energy in times of danger. This is known as our "sympathetic response" or fight-flight-freeze response. The brainstem does use the other regions to evaluate levels of threat, but is nevertheless the first source of information.

Limbic System

The next region, the paleomammelian brain or limbic system, refined the basic drives of the brainstem and added the apparatus for memory and emotion and relationships (Ratey, 2001, p.10). The limbic system is also where meaning making begins, as our brains evaluate situations and context, creating and assigning meaning, and then providing motivation to act in response according to that meaning. Daniel Siegel refers to this process as our "e-motions" or the bodily sensation and processes that "evoke motion" in addition to providing affect states (2010, p. 17).

Attachment is also a key aspect of our limbic system. Without the limbic system we would not be able to develop and maintain relational and emotional attachment to one another. For example, think about the difference between our interaction and attachment with a dog or a cat versus that of a lizard – mammals have the capacity for connection, while reptiles do not (Siegel, 2010, p. 17).

The limbic system is also important in the regulation of hormone/chemical functions within the embodied brain (Siegel, 2010). This is done through the hypothalamus, which sends and receives hormones throughout the body. Sometimes neuroscientists refer to this as the "extended brain" to illustrate how the brain is literally woven into other organs of the body (most notably the heart, lungs, and digestive tract) (Siegel, 2010; Thompson, 2010). An example is *cortisol* which is secreted through the adrenal glands in times of stress so that our brains/bodies are prepared to act quickly if a threat is imminent. The response is beneficial in acute stressful situations. To illustrate the cortisol process more concretely, let me portray a scene wherein a timely cortisol response is absolutely necessary.

I live in Southern California; imagine as I hike through the foothills at the base of the local mountain range I notice a mountain lion in the distance. I want my endocrine system to be able to secrete cortisol quickly and efficiently so that I am able to respond immediately and get myself out of there. However, in a situation that is not life-threatening, as in the typical daily challenges and stresses of life and ministry, if cortisol is secreted over and over at the same levels and intensity as if I were being chased by a mountain lion (as in cases of chronic stress), the levels become toxic to the brain and interfere with neural growth and function (Siegel, 2010). In fact, what often happens in trauma is that the endocrine system becomes hypersensitive as a result of the traumatic experience and causes cortisol levels to spike in response to minor

stressors (Siegel, 2010). The painful and traumatic memory is embodied, thus an embodied approach (such as incorporation of regular wellness practices) is helpful in learning how to monitor and regulate cortisol levels.

The limbic system also encompasses the main tools we use for memory – the *amygdala* and *hippocampus*. The amygdala is an almond shaped region that is vital to fear response (Siegel, 2010). In the above hiking example, the amygdala would have been what aided and interpreted the endocrine response by attaching meaning to the mountain lion. This would have occurred in my embodied brain unconsciously and registered the mountain lion as a threat to my safety. If, on the other hand, the perceived mountain lion turned out to be nothing more than a rock, the re-evaluation would call upon memories of rocks and realize that it was not a threat and a de-escalation process would ensue with another chemical (gamma amniobutyric acid, "GABA"[51]) being secreted to counteract the cortisol.

The hippocampus brings all of the limbic pieces together. It is the cluster of neurons that pieces everything together or integrates experience into a meaningful memory. And not simply memory, but multilayered memory, including: facts, thoughts, emotions, perceptual information, sensations in the body, and self-reflections – all into a coherent story or narrative. This storying process is really what makes human beings unique (Hogue, 2003). Experiences and events themselves are meaningless; it is not until persons attach meaning to such experiences and events, or construct them into a coherent narrative or story that any lasting understanding is created (Freedman & Combs, 1996). This meaning-making/storying process is precisely how persons construct and continually reconstruct their identities holistically.

If we return for a minute to Rev. Burke, we can see that his experience of "blowing up" at his daughter was informed by number of factors. He was fatigued after a long day at work, so his

[51] I will cover this chemical in the next section below.

cortisol levels were likely high; he had not eaten much since breakfast, so his glucose (blood sugar) levels were low; his amygdala and hippocampus were likely flooding his mind with memories and images of the conflict he had with his co-worker hours earlier; and thus his neocortex (which I will cover in the next section) was most likely lacking an ability to fine-tune and integrate all of the information coming from his limbic system. All of this led to him "blowing up" at his daughter for what he later realized what a minimal issue. Had he been more attuned with his embodied experience, his cortisol levels would not have elevated and he would have been more able to respond empathically to his daughter.

Cortex/Neocortex/Prefrontal Cortex

The cortex/neocortex/prefrontal cortex was the final area of the brain to develop and the most expansive and advanced. It is responsible for fine-tuning our limbic and brainstem functions, for associations, for abstract thinking, planning abilities, and for responding to novelty – particularly to new challenges (Ratey, 2001, p. 10). In human beings there is a sub-region called the "prefrontal cortex" (PFC). It is here in the PFC that human beings have the capacities for abstract and symbolic forms of information, for representations of concepts such as time, sense of self, moral judgment and self-transcendence. In sum, the PFC is the command center where everything is connected – the cortex, the limbic region, the brain stem, the nervous system throughout the body, and the input from/to the social world – are all integrated as the PFC coordinates and balances the firing patterns (Siegel, 2010, p. 22).

Hemispheres

The brain is divided into two halves or hemispheres – the Left and Right. Most neuroscientists caution the popular culture's tendency to over exaggerate the distinctions between the brain's hemispheres, as they must and always work together. Nevertheless, each half does have important different qualities. The "left brain" develops later in life and is responsible for language, logic, interpretation, linear thinking, and literal thinking (Howard, 2006; Siegel, 2010). The "right brain" develops earlier in life and is involved in imagery, nonverbal language, visual pattern recognition, auditory discernment, spatial skills, autobiographical memory, and holistic thinking (Howard, 2006). The real key is to keep both sides balanced and working together. If one side begins to dominate, we tend to experience one of the extremes named chapter two – chaos or rigidity. The two hemispheres are connected via the *corpus callosum*, a band of tissue comprised of several million neurons located between the cortex and brainstem just above the limbic system.

Chemicals in the Brain: Hormones, Neurotransmitters and Proteins

In addition to the physical structures, there are a number of chemicals and hormones that are important in brain function. I will comment on some of the more common ones – particularly as they relate to a holistic, embodied model of wellness.

Hormones

Cortisol

Cortisol is the hormone released during times of stress. It is mediated via the endocrine system within the limbic region. Cortisol is an important part of the "sympathetic process" of "fight-

flight-freeze" which alerts us and prepares us for a quick response to danger by providing bursts of energy and focus.

Testosterone and estrogen

These hormones have profound effects on neural transmission and other brain functions (LeDoux, 2002). One example is seen in the importance of estrogen regulation. Many women need estrogen replacements once their embodied brains reach menopause to help regulate mood and brain function (LeDoux, 2002). This is not due to a mental health condition or pathology; it is simply a matter of physiology.

Oxytocin

This is a hormone involved in reproduction in mammals and particularly for inducing labor in women (Turner et al., 1999). Yet, recent studies in neuroscience believe that oxytocin is also what makes our attachments and emotional bonds in relational processes possible (Turner et al., 1999; Shrier, 2010[52]). According to this research, oxytocin is released when persons either remember a positive emotional relationship or receive a positive physical touch (such as shoulder massage), but levels are lowered when persons remember emotionally negative relationships.

[52] Paul Shrier, Professor of Practical Theology at Azusa Pacific University, presented a paper entitled, "Attending to Our Direction: the Spiritual Discipline of Attending to Those We Serve," at the annual conference of the *Society for Pastoral Theology* in Chicago, IL, June, 2010. The paper explored the how the neurochemical oxytocin is secreted through positive physical contact in loving relationships. This paper was based on research he and his wife, Cathleen Shrier, Professor in the Department of Biology and Chemistry at Azusa Pacific University, have been conducting.

Neurotransmitters

Endorphins

Endorphins are the "morphine of brain" and serve as a pain killer and tranquilizer (Howard, 2006). Endorphins are released when we feel physical pain, during relaxation exercises, and when we engage in vigorous exercise – particularly aerobic exercise (Howard, 2006; Ratey, 2008). In fitness circles this is the neuroscience behind the "runner's high" – a condition distance runners experience wherein they feel as if they are running on air and could literally run for days on end.

GABA

Gamma aminobutyric acid (GABA) is an inhibitor and plays an important role in soothing or overriding of our sympathetic arousal process in the limbic region (the fight-flight-freeze response) (Howard, 2006). What this means is that when our limbic region causes arousal in times of acute stress or fear, we need GABA to be secreted to counter act this process (Siegel, 2010). This is known as the "parasympathetic process" (Howard, 2006). If this de-escalation process does not occur we are prone to aggression, violence, and toxic levels of chemicals such as cortisol in our brains/bodies (Howard, 2006). Without GABA inhibition/regulation neurons would send out action potentials continuously under the influence of glutamate (see below), eventually "firing themselves to death" – and if this occurs the brain is susceptible to stroke, epilespsy and possibly Alzheimer's disease, among other disorders (LeDoux, 2002, p. 56). In short, GABA is vital in the regulation process of the embodied brain.

Glutamate

Glutamate works closely with GABA and is considered a workhorse in the brain and is vital in learning (Ratey, 2008). Glutamate stirs up activity to begin the communication process between two neurons while GABA slows the process down. These two chemicals work together to balance each other out. As glutamate activates communication between neurons, stronger attractions and patterns develop and cause "binding" between the neurons involved (Ratey, 2008). Glutamate is also vital in our basic life-sustaining metabolic processes that occur continuously and unconsciously in throughout our bodies (LeDoux, 2002, p. 53).

Regulators: Dopamine, Norepinephrine, Serotonin.

These neurotransmitters regulate the flow, sensitivity, and efficiency of neurons and thus are grouped together as "regulators" (Ratey, 2008). They can override other signals coming into the synapse, lowering the "noise" or they can amplify it in the brain, but their primary role is in adjusting/regulating the flow of information in the communication processes between neurons (Ratey, 2008, p. 37). I will explore each one briefly.

Dopamine

Dopamine has various roles, but its main one is to function as the reward process or "chemical of pleasure" in the brain (LeDoux, 2002, p. 246). Additionally, it notifies us that something novel has occurred, that something pleasurable may occur, or for switching our attention (LeDoux, 2002, p. 246).

Norepinephrine

This neurotransmitter often amplifies signals that influence attention, perception, motivation, and arousal (Ratey, 2008). It is also involved in storing information into long-term memory and helps establish neural growth associated with memory (Howard, 2006). The release of norepinephrine in the sympathetic arousal process (escalation and activation process) of the limbic region (the fight-flight-freeze response) clarifies why memories of intense experience – shock, trauma, fear, and so on – are often so vivid in our meaning making and memories. In fact, often times only a slight reminder triggers a powerful sensory response in persons who have had an intense experience.

Serotonin

This neurotransmitter modulates brain activity. It influences mood, impulsivity, anger, and aggression (Ratey, 2008). Serotonin is also closely associated with depression. Low levels of serotonin create a depressed mood, while higher levels are associated with relaxation and rest. Researchers are not exactly sure how serotonin impacts depression.

Together the three regulator neurotransmitters comprise what pharmaceutical companies are interested in, as most of the drugs that are prescribed to improve mental health target one or more of these neurotransmitters (Ratey, 2008, p. 38). For example, Ritalin, the drug most often used to ease attention-deficit/hyperactivity disorder (ADHD) works by raising the levels of dopamine and thus calming the mind (Ratey, 2008, p. 38). And Prozac, the drug most often used to treat depression, helps regulate serontonin and the brain activity that can get out of control and lead to depression (Ratey, 2008, p. 38). However, particularly important for my theory of wellness is that rather than finding ways of balancing these neurotransmitters artificially, we can

do the very same thing naturally through regular practices of wellness such as physical activity, attuned self-reflection, adequate rest, proper nourishment, and life-giving relationships. Our embodied brains are built to balance, regulate, and integrate themselves, if we know how to utilize their God-given abilities.

Growth Factors: Proteins/Neurotrophins

In addition to hormones and neurotransmitters, there are very powerful growth proteins or *neurotrophins* in the brain that are vital in the health of neurons and neural networks. While the neurotransmitters carry out the signaling and communication in the brain, the neurotrophins build and maintain the cell circuitry itself (Ratey, 2008, p. 38). In other words, one group is responsible for the communication signals and the other group is responsible for building and maintaining the communication infrastructure. Again, I will explore each one briefly.

Brain-derived neurotrophic factor (BDNF)

BDNF improves the functioning of neurons, encourages their growth, and reinforces and protects them by strengthening the signal and connection between neurons (Ratey, 2008). Neuroscientists often refer to this as "long term potentiation" (LTP) wherein there is a "strengthening" of the synaptic activity through "reverberating" neural circuits triggered by repeated experience (Barth, 2001).[53] This process is particularly important in memory and learning. Dr. Ratey explains how this works:

> When the brain is called to take in information, the demand naturally causes activity between neurons. The more activity, the stronger the attraction becomes, and the easier it is for the signal to fire and make the connection. The initial

[53] LTP was discovered in the 1970s by researchers (Bliss & Gardner-Medwin, 1973; Bliss & Lomo, 1973) who built on D.O. Hebb's earlier work (in the 1940s) and "demonstrated that synaptic transmission is facilitated when it is preceded by intense high-frequency stimulation of the presynaptic neuron" (Barth, 2001).

> activity marshals existing stores of glutamate in the axon to be sent across the synapse and reconfigures receptors on the receiving side to accept the signal. The voltage on the receiving side of the synapse becomes stronger in its resting state, thereby attracting the glutamate signal like a magnet. If the firing continues, genes inside the neuron's cell nucleus are turned on to produce more building material for the synapses, and it is this bolstering of the infrastructure that allows the new information to stick as a memory. (Ratey, 2008, p. 39)

What this means in simple terms is that signals are sent in both directions across the synapse and not just one direction (Barth, 2001). This may sound simple, but it is anything but simple. The realization of the two-way process of synaptic communication was revolutionary in the field and illustrates the constructive role behavior or experience or wellness practices play on the structure of synapses – and thus the brain itself. One's regular, repetitive experiences shape the structure and function of the brain for better or worse. For Rev. Burke the regular, repetitive disconnection with bodily wisdom and sensations led to chronic levels of cortisol. For Rev. Jones this meant learning to ignore the physiological need for rest and thus inhibiting her ability to handle stress and care for others. Fortunately, for both Rev. Burke and Rev. Jones (as well as the other participants in this study) they were not "stuck" in this pattern. In fact, they were able, through regular, repetitive practices of wellness to create new neural pathways and strengthen synaptic connections in ways that connected them more with their bodies and increased the capacity for caregiving with others.

BDNF also uses other vital ingredients in the growth processes of learning in the brain and the reinforcement of the brain-body/body-brain interconnection. These growth factors include: *IGF-1 (insulin-like growth factor), VEGF (vascular endothelial growth factor),* and *FGF-2 (fibroblast growth factor).*

IGF-1(insulin-like growth factor). This growth factor is released by the muscles during physical activity when they sense more fuel is required (Ratey, 2008). It works with insulin to

deliver glucose to the cells. Glucose, broken down sugar in the blood stream, is the main energy source for the muscles and sole energy source for the brain. We obtain glucose as our bodies digest the carbohydrates that we consume. Consequently, a diet lacking a necessary amount of healthful, complex carbohydrates will reduce the amount of glucose available and thus impede IGF-1 from being released. Often this situation leads to fatigue, irritability, reduced ability to focus and problem solve, loss of ability for memory and learning, and reduction in immunity cells.

VEGF (vascular endothelial growth factor). VEGF kicks in when our bodies sense they need more oxygen in our cells via our bloodstream (particularly in times of physical activity) (Ratey, 2008). When this occurs, VEGF builds more capillaries in the body and the brain to receive and transmit oxygen throughout the embodied brain. This oxygenation process increases the flow of oxygenated blood throughout the embodied brain, but it also reshapes the brain the processes themselves. Increased levels of oxygenated blood has been shown to improve functionality throughout the embodied brain – particularly in mood – and thus VEGF is being researched as a potential target for the treatment of depression (Warner-Schmidt & Duman, 2007).

FGF-2 (fibroblast growth factor). FGF-2 is another vital growth factor that helps tissue grow throughout the embodied brain (Ratey, 2008). Like the other growth factors, FGF-2 is particularly activated and efficient during physical activity such as exercise. FGF-2 has been shown in preliminary animal studies to protect the heart from injury associated with a heart attack by reducing tissue decay and promoting improved function after reperfusion (the return of oxygenated blood to the heart after a period of low or no blood flow) (House et al., 2003).

Additionally, researchers have shown that low levels of FGF-2 play a significant role in excessive anxiety (Kuhn et al., 2012).

In sum, while this was certainly not an exhaustive account of every structure and chemical of the brain, it is very clear that a holistic perspective of the embodied brain is helpful. Often times those of us in pastoral theological caregiving have neglected or not had the lexicon to describe how our embodied brains influence and interact with our experience, cognition, meaning making, and other "skull encased" brain activities. In other words, how the brain processes information in both top-down and bottom-up ways. Therefore, what we need is to explore further how this dynamic and complex ecosystem actually functions.

Functionality of the Brain

Now that we have a better understanding of the structures and chemicals of the brain, we need to explore how these structures communicate with one another in the embodied brain ecosystem. Therefore, I will now turn to the functionality of the brain. Since I have already made the case for the brain as an ecosystem, I will focus on four other absolutely fundamental qualities of the brain as they pertain to my theory of wellness: (1) The Brain-Body-Mind/Soul Relationship, (2) The Paradigm of Plasticity, (3) The "Use It or Lose It" Principle, and (4) Mirror Neurons.

Brain-Body-Mind/Soul Relationship

I hope it is clear by now that the brain is not simply the massive cluster of neurons located within the skull. Rather neural tissue is intricately woven into all the systems of our bodies – our musculature, our skin, our heart, our lungs, our intestines – all mediated via our central and autonomic nervous system (Siegel, 2010; 2012). And information and communication flows in

many directions, not just from the skull enclosed portion of the brain. In other words, just as our thoughts, perceptions and foci of attention influence our bodies, so too input from our nervous systems and hormones from our bloodstream directly influence our ways of making sense of the world and constructing our identity. An example is that when we physically smile, our mood and chemical processes of the brain inform us that we are "happy" and our immune system functions increase in their efficiency, protecting us from auto-immune disorders (Howard, 2006). Yet, we also smile when we are happy. So which is informing the other?

Another example is seen in aerobic exercise. When we participate in vigorous exercise with our physical bodies our brains secrete endorphins (and other chemicals) which make us feel "good" and thus decreases stress, anxiety, and depression. But, we are also more likely to want to participate in physical activity when we are not depressed, stressed, and anxious. In one scenario the physiology appears to drive the emotional, but in the other, the emotional appears to precede the physiological. Again, the question is which way does the information flow in our embodied brain ecosystem? The answer: in both directions simultaneously (Ratey, 2008; Siegel, 2010).

A helpful way to comprehend how this is possible is seen in the fact that the brain is literally part of all the "systems" of the embodied human experience. And this input from the body, this wisdom, forms the vital source of intuition and experience, and powerfully influences our reasoning and the way we create meaning in our lives. Candace Pert, who discovered the endorphin receptor in the brain (the connections which produce the "runner's high" mentioned previously), refers to the "bodymind" and teaches that the brain and nervous system are so widely represented throughout the body with mutual receptors that it does not make sense to speak of them separately (Howard, 2006, p. 33). An example is our intuition. I imagine you can remember a time when you simply "knew" something and literally felt it in your gut with your

"gut sense." In this instance, you were relying on information flowing in both directions (from the bottom-up and the top-down) as you sensed, interpreted, and created meaning – all using the entire embodied brain ecosystem. Dr. Ratey uses the metaphor of "four theaters" of the brain and the image of a neurophysiological river of the mind to explain how this works. Ratey explains that sensory information enters the first theater, *perception*, and then flows through *attention*, *consciousness*, and *cognition*; next it flows through the *brain functions*, such as language, memory or social ability; and finally the information flows into the fourth theater – *identity* (Ratey, 2001, p. 341). Yet, the real complexity lies in the fact that information flows both downstream and upstream. I will unpack this idea a bit more in the next chapter as I explore dynamic integration as it relates to wellness.

Paradigm of Plasticity

As mentioned previously, an exciting recent development in our understanding of the embodied brain ecosystem is *neuroplasticity*. Evidence for neuroplasticity has been observed in persons who have suffered brain injury and particularly in persons who specialize in a specific skill. This is because as one learns, studies, and uses repetition, the wiring and firing patterns of this particular skill in the brain are strengthened and made more efficient through motor learning and motor training. For example, brains scans of London taxi drivers revealed a larger and more developed hippocampus in the temporal lobe than London bus drivers; and the hippocampus is important in forming and assessing complex and spatial memories (Le Doux, 2002; Howard, 2006; Ratey, 2008). Likewise, the areas in the prefrontal cortex affecting the motor control of the fingers of the left hand (particularly the index finger and thumb), are much more active in brain scans of violin players (Le Doux, 2002; Howard, 2006; Ratey, 2008). Structural changes

(plasticity) are also seen in the left inferior parietal cortex (the area for language) of people who are bilingual (Mechelli et al., 2004). Younger brains do have a greater capacity for these processes; however, with the right tools persons' brains can remain plastic until death.

An interesting study on the "nuns of Mankato" (Sisters of Notre Dame convent in Mankato, Minnesota) conducted by David Snowdon of the University of Kentucky revealed that plasticity was not only important in recovery, but also in prevention of brain disease (Snowdon et al., 1996; Snowdon, 2001; 2003).[54] The nuns, who pride themselves of keeping "mentally fit" by completing vocabulary quizzes, doing brain teasers and puzzles, writing in journals, meditating, and conducting intellectual debates were studied to see what, if anything, was occurring in their brains during such activities. The results discovered by Snowdon reveal that these women live much longer than the general population and have reduced instances and severity of Alzheimer's disease, dementia, and other brain diseases. In short, the nuns who participated in practices of wellness (mental fitness) regularly appear to have more, healthier, and more efficient neural networks and connections. It is still too early to make absolute correlational claims to this, but the "coincidence" is certainly worth exploring more thoroughly.[55]

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[54] In describing the "nun study" Snowdon writes, "The Nun Study is a longitudinal study of aging and Alzheimer disease in 678 Catholic sisters who are members of the School Sisters of Notre Dame congregation (1-11). The participants were 75 to 102 years of age at the beginning of the study in 1991, and the oldest member had survived to 107 years of age by 2002. There are three basic sources of data available about the participants. First, convent archives provide information about potential early and middle-life risk factors for Alzheimer disease and other disorders. Second, annual examinations document changes in the cognitive and physical function of each participant during old age. Third, because each sister agreed to brain donation at death, the structure and pathology of the brain can be related to early and middle-life risk factors and to late-life cognitive and physical function" (Snowdon, 2003, p. 450).

[55] On the surface, this appears to be significant evidence of neuroplasticity as the result of specific repetitive practices. However, the question of whether plasticity is the result of specific experience and repetitive practice or the environment as a whole has been suggested (Barth, 2001). This question is based on other studies conducted on rats with "enriched environments" consisting of opportunities to promote social interaction, exploratory behavior, and motor skills (Dalyrymple-Alford & Kelche, 1987; Einon, Morgan, & Will, 1980; Gentile, Behshti, & Held, 1987; Held, Gordon, & Gentile, 1985; Hughes, 1965; Barth, 2001). These studies revealed similar improvements in functioning – particularly in the recovery process following either cognitive or sensorimotor deficits in the rats that lived in "enriched environments" as compared to rats in un-enriched environments. Additionally, the rats show anatomical changes in several brain areas (Barth, 2001). So was it the environment as a

Plasticity does have limitations based on certain factors such as age and genetic make-up, but the overarching principle is that persons (within limitations) have some capacity to reshape their brains. For example, persons who suffer a stroke will most likely never regain every brain function that was lost, but the brain will relearn and rewire the processes for sight, speech, cognition, and so on through rehabilitation. Likewise, neural networks that are not utilized will erode and atrophy, and eventually die away if they are not stimulated. In neuroscientific realms, this notion is based on Darwinian survival of the fittest and the principle "use it or lose it" (Ratey, 2001, p. 47). In other words, the brain is like a muscle that can be trained and strengthened, yet it can also atrophy and deteriorate with neglect.

Use It or Lose It

In athletic and fitness circles, the principle of "use it or lose it" is common. We realize that Olympic athletes, while born with certain genetic dispositions must also train vigorously for years to remain competitive in their events. We also realize that those of us who try to stay in shape must continue to challenge our bodies with greater resistances or we lose muscle tissue and cardiovascular capacity. In short, our bodies will atrophy if we neglect them. The same is true for our brains. If we do not use/activate the neural networks and firing patterns, they will eventually stop working, and we will lose its capability. Dr. Ratey provides an example using eyesight to explain this theory (2001, p. 35-36). Most persons who need prescription glasses have different strengths for each lens because each eye is different. One eye is stronger or the more dominant eye and the eyeglasses work to make each eye similar in strength. Parallel strength is very important for eyesight because, as Ratey explains, if one eye remained stronger

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whole or the specific practices? I believe either answer, or a combination of both, is still good news for pastoral caregivers and others in mental health. In either case, the fact that the brain is malleable and dynamic from either circumstance is the exciting news.

the neurons serving the stronger eye would branch out and override the connections of the weaker eye, making the latter permanently weak (2001, p. 35-36). Likewise, if a baby is born with a cataract in one eye, doctors know they must remove it before the baby ages too much or else the sight in that eye will be permanently lost as the other eye will learn to compensate and rewire the vision protocol and processes in the brain to bypass the damaged eye. In this sense, plasticity can be too much of a good thing.

This Darwinian tendency may sound problematic (and it can be); however, the overarching theoretical conclusion is very good news – that our brains are amazingly plastic and flexible. Furthermore, we have some capacity to train and utilize plasticity in life-giving ways if we know how. Therefore, the key question is, "What sorts of things are good forms of training and practice?" The preliminary answer is that everything we do and experience shapes our neural networks and firing patterns, yet a more precise answer is what I am after in this study. I constructed my pastoral theological theory of wellness and the wellness practices around the five areas – Attunement, Nourishment, Movement, Rest and Renewal, and Relationships – to explore this question. I believe what I have discovered in this study is that the proposed wellness practices do have the potential to aid plasticity in healthful ways. Participants increased their awareness and attunement with their entire embodied selves, rewired their constructions of identity to be more holistic – particularly emphasizing balance, expanded capacity for empathy, and increased sense of discipline. One participant summed this experience up sating, "I guess somehow it connects you more with yourself and with God at the same time."

The brain-body/body-brain relationship, plasticity, and "use it or lose it" principles are interesting and vital in our lives. But what is more pertinent about this research for pastoral theology, care, and counseling is how and why practices of wellness shape our attunement with

self and openness, reciprocity, and empathy with others. Neuroscientists have proven that persons who are more aware of and more connected with/to their bodies are more empathic because when we can sense our own internal state, the pathway for resonating with others is opened as well (Siegel, 2010, p. 62). In other words, as we become aware and attuned to our own "inner world" – our experiences, bodily sensations, mood states, and meaning making processes – we are able to reconstruct another's world, as if we are "trying on" their experience (Iacoboni, 2008; Hogue, 2010). Empathy thus begins in connection with the "self." The neurological explanation for this is "mirror neurons."

Inter-Relational Brain: Mirror Neurons and Empathy

Inter-personal relationships and attachments are vital for persons – not simply to be "well," but for their very survival. Human development research continues to emphasize and elaborate on the importance of early bonds between a caregiver and a child for health and wellness – in the moment, but more importantly throughout the child's life. Conversely, many human development studies also use tragic examples to illustrate the consequences of a child not having these vital interconnections – pointing out how lack of human contact leads to challenges in language development, social interaction skills and behavior, academic performance, empathic capacity, and so on (Ratey, 2001, p. 295). We now know the brain is inherently social. The most primitive regions – the cerebellum and amygdala (parts of the brainstem and limbic region) – are the ones most responsible for the brains inter-relational processes (Ratey, 2001, p. 295).

Theologically in Christian circles of thought inherent relationality is very common. In fact, a few of the participants named "relationality" or "being in relationship with God" as a vital aspect of human personhood. This normative view is informed by the Christian doctrine of the

Triune Godhead or the Trinity. According to Trinitarian doctrine, the Three-in-One are separate, co-equal persons, yet wonderfully and mysteriously inter-related in a perichoretic divine dance of love, mutuality, reciprocity and justice. The next step towards humanity as inherently realitional in Christian theology is the concept of Imago Dei – that human persons are created in the very image and likeness of the triune God. Again, many of the participants in this study named "Imago Dei" specifically as part of their understanding of theological anthropology. In this Christian normative view, the message is clear – interpersonal connection is absolutely vital for human beings. And if one does not have healthy life-giving relationships, individuals are damaged and society suffers at large.

Neuroscience is now beginning to provide some partial evidence, or at least some new lenses for looking at how and why the research suggests this. While this information does not appear to be earth shattering in the highly relational inter-connected postmodern world, the neuroscientific basis for this relational quality is a recent discovery. Neurologically, the significant finding was "mirror neurons" and it is this remarkable inter-relational quality of our brains that provides the neurological basis for empathy.

Mirror Neurons and Empathy

Mirror neurons were first discovered in the mid 1990s by a group of Italian neuroscientists studying the premotor neurons, the brain cells involved in planning and initiating movement in macaque monkeys (Rizzolatti & Craighero, 2004). The researchers were interested in monitoring what occurred in the monkeys' brains as they performed a simple task – grasping for and eating a peanut. As the researchers expected, the particular cell they were monitoring would fire (and light up on the screen) when the monkey performed the task. However, what the researchers did

not expect was that the monkeys' neurons fired in the very same way even if the monkey only watched this activity being performed and did not move itself.[56] Somehow the brain of the monkey observing the activity was "mirroring" or able to mimic the brain of the one performing it. As the researchers repeated this experiment they refined their understandings of this process and realized that the mirroring occurred most prominently when there was a predictable and purposeful sequence or intentionality in the action (Siegel, 2010, p. 60). For example, the mirror neurons were able to predict and "figure out" what was going to occur based on previous experience, and thus mirror the experience without actually performing it.

While not definitive, studies in the human brain using functional magnetic resonance imaging (fMRI) show the same mirroring process as in macaque monkeys (Keysers & Gazzola, 2010). Again one person's brain is able to predict and mirror activities and even abstract concepts (such as emotions) in another's brain. In human brains this occurs utilizing "mirror neuron systems" more than isolating specific neurons for specific tasks as in the monkey's brain, but results are similar (Hogue, 2010). Researchers have recently added another layer of complexity in the human brain by identifying two different classes of mirror neurons. For very specific actions/activities like the peanut study the "strictly congruent" mirror neurons fire, but when an action/activity is more general and abstract the "broadly congruent" neurons fire (Rizzolatti & Sinigaglia, 2006). The latter, broadly congruent neurons are seen to be the most influential in one's empathic capacities.

What we learn from these experiments and theories is not that we have (or ever will) completely figure out how the mirror neuron systems work in the human brain, but that they do

[56] The researchers made this discovery as one of the researchers reached for and ate a peanut between experiments. As they researcher did this, the monkey's brain lit up in the very same way as when it had performed the task itself. Surprised and excited, the researchers then conducted the same test using two monkeys and got the same result over and over, and thus the "mirror neuron" theory was born.

work. In other words, we do know that as we encounter and engage the other in the relationships, we "connect" unconsciously and consciously by building a representative internal state of the other within our own internal world. It is as if we are "wiring a mile" in the other's neural networks based on our previous experience and intuitive sense of intention. Add to this that the more intra-connected and attuned we are with our own embodied brain ecosystem, the more able we are to attune compassionately and empathically with others. It appears that in mirror neurons we have the neurological understanding behind Jesus' instructions to love our neighbor as ourselves in the Christian faith teaching. Our ability and capacity to love, empathize with, and care for others, is directly tied to our own connectedness and care of self.

SUMMARY

In this chapter I explored some of the key structures, chemicals, and functionality of the brain with a particular focus on holistic understandings of the embodied brain and wellness. It was clear how vast, complex, and dynamic the embodied brain ecosystems are, and yet in some way they often work in amazing harmony. Furthermore, it was evident that information and energy flow in both "top-down" (originating the in prefrontal cortex and moving down through the limbic region, brainstem, and into the central nervous system) and "bottom-up" (originating the central nervous system and flowing upward through the brain stem, limbic region, and into the prefrontal cortex) directions in this communication system. Additionally, I made the case for how important regular practices of wellness are in inducing neuroplasticity in healthful and life-giving ways. Lastly, I illustrated the inexorable relationship between our intra-connectedness and our inter-connectedness via the mirror neuron system.

CHAPTER FIVE: A WORKING THEORY OF WELLNESS

"The idea that activity might change the heart or muscles is seldom questioned. The possibility that behavior could change the structure and function of the brain is seldom considered" (Kolb, 1995, p 5).

Introduction

Having named the holistic quality to human personhood theologically and neuroscientifically, and having provided some level of understanding of how the embodied brain ecosystem works multi-directionally, it is time to investigate how I bring this together in what I refer to as "wellness," and how this might shape practices of pastoral care and counseling. In presenting a "working" theory of wellness in a de-centered and collaborative stance, I bring together the lived experience and local knowledge of the participants, the theoretical and theological insights from the literature sources named previously, and my own ideas and concepts. I call it a "working" theory because I do not believe that wellness is static, nor a destination to which we can arrive. Rather wellness is enacted in the ongoing pursuit of living into an identity of (whole)self-in-relation-in-context. It is an identity which acknowledges our intra and inter-relationality, and the correlation between care of self and capacity to care for others.

In developing this theory of wellness, I asked the participants two main questions about wellness/wholeness[57] in this study: (1) what is your current definition or understanding of "wholeness" or "wellness?" And (2) when do you personally feel most "whole" or "well?" I have organized their initial responses into the following table (see table 5.1).

[57] I used the term "wholeness" in addition to "wellness" in the interviews because it is more common and the participants are more familiar with it.

Table 5.1 – Reflecting on Wellness

What is your current definition or understanding of "wholeness" or "wellness"?	When do you personally feel most "whole" or "well"?
"Wellness is something that we tend to forget about it because we get so busy…Pastors tend to care for the wellness of other people, but forget about themselves – and it's very easy to fall into that."	"When I'm doing something I love."
"Well, first of all it is to be functional in daily life, and then the quality, the kinds of qualities of life – people being satisfied with what they're doing, finding meaning and purpose, connectedness."	"When something has gone well."
"Balanced – articulate – self-aware and aware of environment equally – you know in a balanced way – joyful, you know some kind of deep sense of satisfaction that exudes out their pores."	"There are a couple of things that come to mind. The first thing that came to mind was when I'm in a period of silence – extended silence. And then the next image that flashed in is in worship. Here, there is a wonderful, not always peaceful, but a really wonderful loving and accepting relationship between me and this congregation. And it doesn't mean that everybody loves me and we get along necessarily, but there's a respect. And I can actually worship here even when I'm up front doing stuff. And I feel very whole in many of those moments."
"When I hear "wholeness" or "wellness" I think of a comprehensive health to a person. I think, you know, not just in one specific area do we find wellness, but if we're going to use that word, I think we need to talk comprehensively."	"When those comprehensive areas are running well, on all cylinders."
"I think a person who is whole or well is a person balanced, well rounded, has – umm – rest and work, and some sort of intellectual stimulation in their lives. I guess if you really pushed me on it, you wouldn't have to be physically healthy, yet in the ultimate sense, being physically healthy helps with wellness."	"When I'm rested. I guess when I'm with my husband and my friends, and when I feel that I have accomplished things."

"I think that I would say that "wellness" is what God hopes for most for us. And so it has to do with the thriving of bodies and spirits and hearts or emotional lives – and I might make distinction between those two, but they are so systemic that they fade into one another and become impossibly fuzzy to tease apart. A thriving."	"God's persistence and creativity is demonstrated by how many ways the light breaks in. I don't feel like there's one place in particular where that's confined. You know I feel deeply well on vacation. But there are times that I feel deeply well in the middle of work too."
"My current definition is that it is not one part or two parts, but physical, emotional, spiritual. All of my life affects all of my life. Every part – I'm not made up of parts that do not affect one another."	"When I am operating in the areas that I'm gifted at. I feel really whole and well when I have a task or a thing to conquer, a mountain to climb, a workout to get done. I love challenges. I feel really whole when I'm at least attempting a challenge. I feel the best when I make sure I've added some kind of movement or physical things to me."
"A desire to be able to figure out how to be healthy – from physically, psychologically, that means eating well, figuring how to rest, figuring out how to interact well with other people, figure out how to think well, not react to circumstances, be reflective, be present to my needs and my desire for rest, for recreation, for solitude, as well as recognize those [aspects] in other people."	"I think when I'm at work I really see my best side coming out, or when I'm interacting with someone, or being present with someone, or caring for someone as a part of my ministry."

In reflecting on wellness, the participants named many of the key elements that the neuroscientific literature identifies as important to health and well-being. These include: balance (homeostasis), integration, attentiveness to/with self (attunement), relationships with others, self-transcendence or connectedness with the divine, rest and silence, and having a holistic perspective of identity. The interviews and neuroscientific literature confirm and support one another around these elements.

However, the participants also named elements of "contentment," "satisfaction," and "sense of purpose" in life; as well as a certain "sense of joy" in one's work or occupation as

important aspects of their experiences of wellness. One participant summarized the importance of work saying, "I think we're created to be somehow useful, to have meaningful work, and it's hard for us when we aren't able to have that." These elements – contentment, satisfaction, purpose, joy, and meaning – are the intangible, and often theologically informed, qualities and capacities that neuroscience has more trouble articulating, and why it is vital to bring one's theological understandings into the conversation with neuroscience.

The most noteworthy finding is that the participants' way of naming and experiencing wellness included an inherently teleological quality. In my denomination of the Christian faith tradition, the Reformed Church in America, this quality is often referred to as finding one's "calling" and being "called forth" by God.[58] There is an emphasis to discern one's giftedness, and utilize one's passions and resources in service to God and others within this calling. In short, the call is to embrace one's capacity to be an "imager" of God, following Christ "in all he did and said" in co-participation with God's transforming love.

No participant used the word "call" specifically; yet, the element of calling was evident in some form for nearly all of the participants as they defined "wellness." In light of this, I have revised my working theory of wellness by adding a central integrative force, which runs through each of the five areas, holds them together, and provides an impetus or direction for them. I call this integrative force "embracing one's calling." This integrative force is the way in which one embodies and lives out "wellness" as a (whole)self-in-relation-in-context.

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[58] The Reformed Church in America recently completed a ten year visioning process entitled "Our Call." Our call has the following purpose statement: "Our Call in the Reformed Church in America is to build on the foundations of discipleship, leadership, and mission and to renew existing congregations and start new churches as we work toward a multiracial future freed from racism." Within this call are three main elements: (1) Discipleship, (2) Leadership, and (3) Mission. Discipleship "forms us as we seek to follow our Lord in all he said and did--living out his passion for justice, his care for the outcast, and his seeking for God's kingdom as we answer his invitation to open our lives to the transforming power of God's love. In leadership "we build a healthy, growing future for our ministries when we identify, equip, and deploy people with gifts for leadership." Mission "becomes a way of life when we reach out to people with the gospel, meeting needs in our own neighborhoods and cities and through global partnerships" (https://www.rca.org/sslpage.aspx?pid=6632, accessed 12/8/2012).

In this chapter, I will explore each of the areas of wellness named above in a critical-correlational model of bringing social science (most notably neuroscience and exercise physiology) into conversation with theology (from a Reformed, Christian perspective) and the lived experience of the participants, as a pastoral theologian. Following this, I will unpack how this theory might inform and utilize the brain's plasticity of "dynamic integration," or the ability to *regulate, integrate* and *balance* information, experience and identity. In so doing, I will bring all of this together with the "storying" and "reauthoring" principles of narrative theory and therapy[59] to describe how persons [re]author their identities holistically (linguistically *and physiologically*, consciously *and unconsciously*) and increase their capacities for empathic encounters as they seek to love their neighbors as themselves.

EXPLORING THE AREAS OF WELLNESS

This project began with five interlocking areas of wellness: (1) Attunement, (2) Nourishment, (3) Movement, (4) Rest and Renewal, (5) Relationships. Yet, in light of the participants' experiences, I have added a central integrative force – embracing one's calling. Each of the five areas is distinct; yet, not entirely separate or separable from the others, and all are part of the larger process of embracing one's calling by God to image Christ and co-participate with Christ's redeeming, reconciling, liberating, and empowering work in this world.

[59] Narrative therapy takes a postmodern, social constructionist stance of "storying" and "meaning making." What this means is that persons make sense of their lives through the stories they tell and are told about them. Meaning arises in particular contexts in the cultural milieu as mediated in language. Thus we make sense of our lives in the context of our social history, shaping stories about the groups we belong to and about how we came to be who, how, and where we are (Monk et al., 1997, 34*).* Within this theory, "reauthoring" is the process through which the therapist and client thicken alternative stories/identities in the person as they explore unique outcomes in more detail. As they thicken the plot over time and contexts, organizing and giving meaning to these experiences the person changes and lives into the stories they are rewriting about themselves.

While each area of wellness is important in the overall quality of life of persons, what's more important, according to the participants' lived experience, is the ability to integrate them and maintain a vital balance of each area as they come together in a unified whole as one embraces his or her calling. The following table (Table 5.2) provides the participants' reflections on wellness after their six week engagement of the pastoral wellness program.

Table 5.2[60] - Revisiting Wellness

What is your current definition or understanding of "wellness"?
"Balance – a person who is whole or well, is a person [who is balanced] and what I mean by balance is that life doesn't get too much out of kilter – it's not too much of the intellectual, or too much of the physical, but every aspect of life is paid attention to and affirmed, and try to somehow live a life that has all of the categories that you pointed out to me."
"Attentiveness – integration – balance."
"Integrated – just that they're okay with where they're at – (I'm not sure how to say it) – but for whatever stage or whatever is going on; that they're root is really hanging together – even though they may be going through a crisis or whatever. I do to think that persons are not really whole until they have a relationship with Christ."
"A very balanced life."
"Wellness would mean I just sense they are really balanced in the key areas of their lives – physical, emotional, psychological, spiritual. And what have I seen of people who are really holistic? First of all, it's a different attitude; they seem to have more joy; they seem to be – you can almost tell right away they are just healthier. I don't know how I can describe all that, they just seem to be healthier – their countenance, their body language – they are tending to more than one area in their life."
"I think having these aspects that I was writing down helped in terms of providing some structure of what it means to be whole. In terms of taking care of oneself, having time for reflecting, eating well, resting – I think that these are pretty good boundaries."

[60] Two participants did not complete the six week program, so there are two fewer responses in this table; as well as in the pre and post-program scores in the sections that follow.

I will return the key concepts of regulation, integration, balance, and calling as these are the forces that shape and guide wellness (i.e. how one goes about embodying and enacting wellness), but before I do I need to examine each of the five areas: Attunement, Nourishment, Movement, Rest and Renewal, and Relationships.

Wellness Area 1: Attunement

Attunement is the intentional focus of attention inwardly, or self-reflection intra-personally, wherein the internal emotional and bodily states are the focus of attention (Seigel, 2012, p. AI-8). Practices of "mindfulness," such as mediation, silence, contemplative thought, body scan focused attention, rhythmic breathing, progressive relaxation, prayer, and journaling are processes of attunement. In these practices, persons slow the physiology of the embodied brain and learn to pay attention to one's entire embodied being.

Attunement is also important interpersonally. It allows one to attune attention to others such that one "tries on" another's experience through the mirror neural system. Additionally, attunement is marked by a de-centered stance of openness and receptivity to the other, or to the self, or to God.

The participants in this study tended to focus on journaling and prayer as their preferred practices of attunement. But one participant thought rhythmic physical activities such as Tai Chi and yoga would be helpful for attuning with her "self." These practices, while movement based, are done in such slow, rhythmic and meditative paces, that they fit this area more so than the movement. A participant also used extended silence in powerful ways as a form of attunement. For her, silence is the place where she connects most with herself and with God. She shared that

she takes a 24-hour period of silence monthly and at least one multiple day silence retreat per year. In her description she reflected that in these times of silence she will:

> …set aside that time for prayer, for meditation, for walking, for coloring mandalas. I will read. I don't do a word fast in terms of written word. I will write in a journal, but it's really kind of an overemphasis on the inward journey for me once a month because I'm not disciplined enough to that prayer thing every day. You can quote me (laughing). And then once a year I do a week to 10 days of silent retreat – and that is really an important – I'm realizing how important that is in my self-care.

In neuroscientific terms, what she is doing is learning how to pay attention and connect with her whole self (her intra-relationality) and is thus more connected to others and more able to provide adequate care (her inter-relationality). Other participants also reflected on attunement in noteworthy ways:

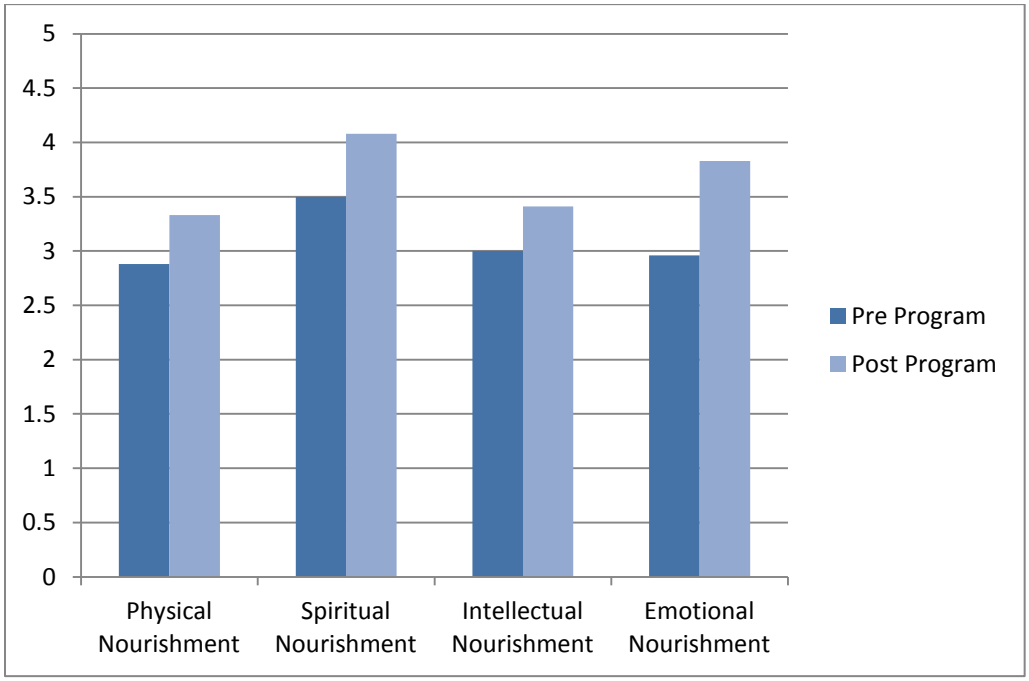
> Reflection 1: I think I am [attuned] – given the Johari Window, there is still a little bit of me (or probably a lot of me) that I don't know (laughing). But, I've integrated the stuff that I've come through and that's part of who I am and know most of the reasons that I respond the way I do. So, yeah, I think I am.
>
> Reflection 2: Yeah, I think a lot about, and have handle on, what I do well and what I don't do well. I'm comfortable with that. I'm comfortable in my own skin.
>
> Reflection 3: I realized where I'm not doing certain things. Having these things spelled out like that – I am not having enough time or space for being in tune with my needs.
>
> Reflection 4: I do that on a regular basis. What I miss is that when the job becomes overly stressful and/or packed with schedules, you know with other peoples' needs, mine go to the bottom of the totem pole.
>
> Reflection 5: I recognize how I need more ways to take care of myself. I know what they are I'm just not sure how to do it.

It is clear in the above statements that some participants felt more attuned than others, but on average the participants reported increases in attunement following the wellness program. One noted how connecting more with himself also connected him more with God.

Wellness Area 2: Nourishment

The wellness area of nourishment consists of different sub-categories including: physical nourishment, intellectual nourishment, spiritual nourishment, and emotional/psychological nourishment. The following chart illustrates the participants' self-scores in the area of nourishment.

Participant Self-Scores in the Area of Nourishment



Physical Nourishment

While the concept physical nourishment as vital in sustaining the basic functions of life may seem obvious, based on the participants in the study, the strong majority of pastors and pastoral caregivers do not think about the connection of nutritional choices and brain function. As I have noted earlier, it appears that this is often due to an underlying dualistic theological anthropology. What I found in this study (as revealed in the chart above) is that when asked to engage in and

reflect upon wellness, pastors and pastoral caregivers do note this connection more intently, but still rate their regular practices of eating "well" lower than the other nourishment sub-categories.

Physical nourishment was one of the lower categories overall for the participants in this study. On average the participants scored themselves 2.88 out of 5.0 in the interview conducted prior to the wellness program ("maintaining a hobby" was the category with the lowest average at 1.83 and "physical activity or exercise" was low as well – averaging 2.83). Following the wellness program the participant self-scores on physical nourishment went up to an average of 3.33, yet still trailed the other areas of nourishment. This trend is potentially problematic from a neuroscientific perspective.

The neuroscientific research has revealed the vital connection between food intake and brain function. Fernando Gomez-Pinilla, Professor of Neurosurgery and Integrative Biology and Physiology at UCLA explains this well in an article entitled, "Brain Foods: The effects of nutrients on brain function." Gomez-Pinilla writes:

> In particular, research over the past 5 years has provided exciting evidence for the influence of dietary factors on specific molecular systems and mechanisms that maintain mental function. For instance, a diet that is rich in omega-3 fatty acids is garnering appreciation for supporting cognitive processes in humans and up-regulating genes that are important for maintaining synaptic function and plasticity in rodents. In turn, diets that are high in saturated fat are becoming notorious for reducing molecular substrates that support cognitive processing and increasing the risk of neurological dysfunction in both humans and animals. (Gomez-Pinilla, 2008, p. 568)

Studies have also been conducted on children's school performance comparing those who ate a good breakfast and those who skipped eating (Pollitt, Leibel & Greenfield, 1981). The children who ate breakfast made measurably fewer errors than the children who did not eat breakfast.

Additionally, research has shown how food impacts mood via brain chemicals. For instance, protein contains the amino acid L-tyrosine, which produces norepinephrine and

dopamine (key neurotransmitters discussed in chapter four), and adequate amounts of these neurotransmitters lead to elevated alertness and stable memory (Howard, 2006, p. 150). Complex carbohydrates contain the amino acid L-tryptophan, which is necessary to produce serotonin (another key neurotransmitter), resulting in a sense of satiety and relaxation (Howard, 2006). Dietary fats are important for the production of acetylcholine, which is crucial for memory formation and neural cell strength (Howard, 2006). Vitamin and mineral deficiencies, when sustained, have been shown to lead to fatigue, poor concentration, failing memory, depression, and insomnia.

Obviously one's nutritional/caloric intake is important for the neurochemical interconnections stated above, but another important connection for persons of faith is the spiritual element of physical nourishment. The late professor emeritus and founder of the Institute for Religion and Wholeness at Claremont School of Theology, Howard Clinebell, names this well. Clinebell writes:

> Even in the daily-ness of our everyday lives, eating and drinking often are much more than simply ways of meeting biological and pleasure needs. There's an existential-spiritual dimension that sheds light of why so many people are moved to express ritual thanks before they eat together. Perhaps there's a dim, subconscious awareness in us of the biological miracle by which what we eat and drink is transformed into music, love, sexuality, thoughts, words, passions, poetry, and prayers. (Clinebell, 1991, p.94)

Clinebell goes on to note the importance of reflecting on eating well within a global environment wherein far too many persons go malnourished – often at the expense of others who are wasteful. Clinebell advocates for making wiser eating choices personally and challenging unjust systems politically. Given the scope of this project, I am not able to address issues of poverty and nutritional injustice in depth. But I do want to highlight that rethinking theological anthropology demands a public theological approach, which names the realities of poverty and nutritional

injustice as manifestations of sin and systemic evil against embodied, whole persons. Physical nourishment is a deeply theological issue.

Spiritual Nourishment

The participants described and illustrated that spiritual nourishment is a vital aspect of wellness for persons of faith. Practices such as, maintaining an active prayer and devotional life, regular attendance of corporate worship, bible study, participation in the sacraments, fostering relationships within in one's faith community, and utilizing one's spiritual giftedness in service are aspects they named as nourishing to their spiritual wellness. Such times allow one to sense his or her connectedness to God and to all other living things, experience the transcendent quality of life, and to provide a sense of meaning and purpose in one's life. One real key for the participants was to distinguish between spending time in spiritual nourishment as part of the tasks of their jobs (e.g. preparing a sermon) versus that of personal devotional time with God. This category of nourishment was scored the highest on average at 3.50 pre-program and 4.08 post-program. Given the participant population, this did not surprise me as it fits with the general dualistic tendencies outlined previously.

Neuroscientific research has also shown tangible effects of spiritual nourishment. For instance, Harvard Medical School's Herbert Benson has looked into the effects of prayer in a book entitled, *Timeless Healing: The Power and Biology of Belief* (Simon & Schuster, 1996). In this book Benson cites a study of nearly 100,000 people who went to church one or more times per week. The persons in this group experienced 50% fewer deaths from coronary heart disease and 53% fewer suicides than the general public. Additionally, there have been many anecdotal

studies on the power of prayer in healing. My point is not to prove this evidence, but to illustrate the vital importance for spiritual nourishment in one's overall wellness.

Intellectual Nourishment

Intellectual nourishment such as: learning a new language, crossword puzzles, Sudoku, taking a cooking class, and higher education are all vital in strengthening and growing new neural networks and connections (Ratey, 2001). New mental tasks and intellectual stimuli help the brain become more adaptive and flexible to future events, and more resilient in current situations.

Intellectual nourishment was the second highest area of nourishment for the participants in this study. They self-scored fairly high in both pre and post interviews, and named practices like reading, staying current on world news, playing scrabble, using the opposite hand to brush their teeth or dry their hair, and conversations with colleagues as sources of intellectual nourishment.

Emotional/Psychological Nourishment

One participant noted that while he was physically exhausted after a workout, he felt really good about himself emotionally. Thus, working out was emotionally nourishing for him. Another participant named trusted relationships of accountability as emotionally nourishing in his life. A third participant described monthly lunches with colleagues as nourishing emotionally. What is common in each of these examples is simply our self-reflective capacity emotionally. In other words, do we know ourselves well enough to know what "drains" us and what "restores" us, or what "stresses us out" and what "soothes" us, and are we capable of self-soothing?

The neuroscience of emotional nourishment is known as regulation and integration via self-soothing. I already touched on this when discussing how the chemical GABA is secreted in the parasympathetic (de-escalation) process in moments of stress. The de-escalation process is what soothes us and turns a potential panic attack into simply a moment of heightened alertness. Yet, self-soothing and regulation extends beyond stress management. One also needs the capacity and flexibility to handle conflict, loss, disappointment, grief, and so on in the complexities of life. One participant named this aspect of her wellness when reflecting a recent memorial service:

> I felt deeply well two weeks ago doing a memorial service for a ninety-year-old woman who died, and there was a lot of weeping in the room, but we remembered her "well" and we were grateful for her life. And nobody erased anyone else's grief, and I was not glad for the grief or for her death. I was glad for the grace that we could experience in that together.

As this participant, and the others, illustrated proactive and preventative practices of emotional nourishment, such as practices of wellness, aid our embodied brains in these processes.

Wellness Area 3: Movement

One of the most profound ways that we can produce neuroplasticity and neurogenesis is through physical activity and exercise. In fact, some neuroscientists claim that exercise is the single most powerful tool we have to optimize our brain function (Ratey, 2008; Arden, 2010). There a few reasons for this. The most basic one is that physical activity increases the volume of blood (i.e. fuel and nutrients) that gets to the brain. With more oxygenated blood available, the brain does not run out of fuel and it can perform it's multitude of functions quickly and efficiently. I also noted in the last chapter that physical activity and exercise secrete powerful neurotransmitters (dopamine, norepinephrine and serotonin) and neuropeptides (proteins) which regulate brain

activity, control stress and anxiety,[61] improve mood and self-esteem, and build the cellular circuitry in the brain (Ratey, 2001; Howard, 2006). Aerobic exercise has been shown to reduce anxiety and some of the symptoms of PTSD, as well as increase self-esteem (Arden, 2010, p. 120-121; Clinebell, 1991).

Research also indicates that physical activity that incorporates learning complex movements like dance, sports, and martial arts can sharpen memory and increase the capacity to master new information (Ratey, 2001, p. 360). Add to this that there is mounting evidence that movement is crucial to every other brain function, including: memory, emotion, language, and learning, and we see how vital movement is our lives (Ratey, 2001). In fact, the parietal and frontal cortex (regions of the brain which are known for movement) also play a significant role in activity related to planning, calculating, and forming intentions. And the cerebellum, which coordinates physical movement, also coordinates the movement of thoughts (Ratey, 2001, p. 148). Clearly movement and physical activity highlight the interconnection and two-way flow (top-down and bottom-up) of the embodied brain.

From a Christian theological perspective movement is built into the very fabric of our understandings of God, of life, of worship, and of healing, wholeness, and wellness. In the creation narrative of Scripture we read of a God who hovers over the waters of the deep, creates from dust, breathes life into being, and walks with us in the garden. Likewise, practices of faith and worship for the faithful are usually expressed through movement and actions. Throughout the centuries of the Church activities such as singing, standing, kneeling, bowing, dancing, the

[61] Ironically, exercise actually produces a similar physiological response as the sympathetic response of HPA axis in the fight-flight-freeze response in times of acute threat and fear. However, during exercise this response occurs in a controlled setting and so it trains our embodied brain's internal communication system to recognize, cope with and alleviate stress. After a few bouts of intense exercise, a person who has been stuck in a pattern of "panic attacks" realizes that a heightened physiological state in the body does not imply imminent doom and thus is able to regulate the stress response – he or she becomes more bodily attuned.

raising of hands, and celebrating the sacraments are all forms of moving in our embodied beings. Yet, ironically the Church has somehow disconnected its theological reflections from active, embodied human beings.[62]

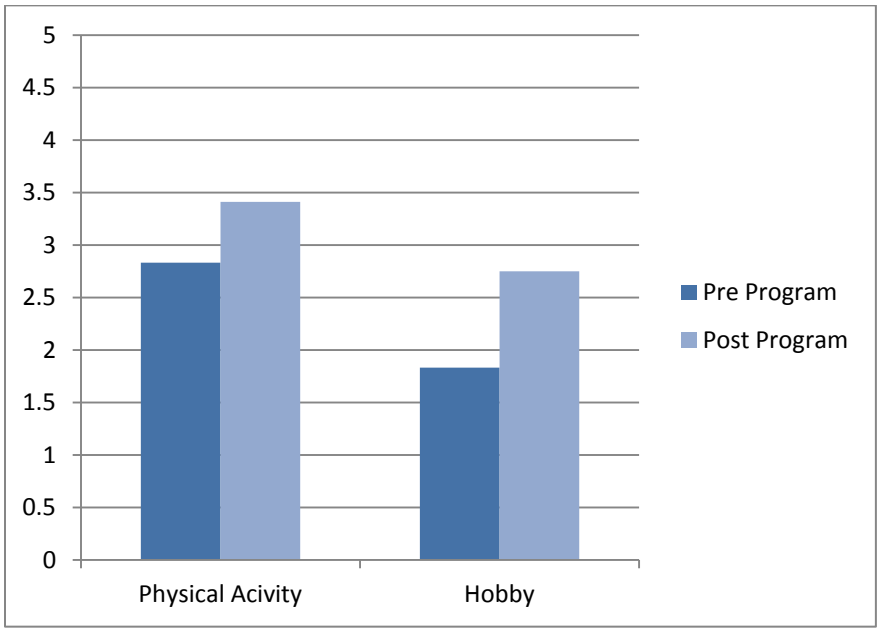
I chose to name this area "movement" rather than "exercise or physical activity," and keep this name, because the term provides a broader understanding of the healthful ways persons can move their bodies as the participants expanded the boundaries of ways in which one might move. Exercise is a particular form of movement with many benefits – particularly aerobic exercise that challenges persons to increase their cardiovascular capacity (VO_2 max) – but rigorous exercise is not the only form of moving one's body that has been shown to impact brain function. Additionally, not everyone is physically able to exercise in the traditional sense of the word. Thus, movement encompasses "other" ways of being active. For instance, one participant named going for a leisurely walk and being mindful of his body as moments of wellness. Another participant named gardening and taking care of his yard as his preferred mode of being active in wellness; and another enjoyed washing the car. Movement might even mean taking the dog for walk as one strolls alongside in a motorized wheel chair like my siblings, or playing a game on the Nintendo Wii entertainment system. The point of movement is to get one's body moving in whatever capacity it is capable.

In addition to the above examples, the participants in this study named movement wellness activities such as: Tai Chi, seated flexibility exercises, and "going to the gym." The pre wellness program average self-score for physical activity or exercise was 2.83, comparatively for

[62] Pastoral theologian David Hogue makes a similar point asking, "Given that the brain records and takes its own cues from the body's movements, why do we not more carefully think through the forms of gesture, posture, and movement that can most likely help worshippers experience awe, reverence, and peace?" (Hogue, 2003, p. 185). Hogue's focus is on how movement aids the process of memory and imagination, which is different than my focus in this project, but the overall message of highlighting embodiment is the same.

maintaining a hobby was 1.83. The post well program average scores were: physical activity or exercise, 3.41, and maintaining a hobby, 2.75. The following chart illustrates these scores.

Participant Self-Scores in the Area of Movement



Wellness Area 4: Rest and Renewal

The participants in this study described themselves as sleeping and resting insufficiently and working well over 40 hours per week. In fact, one participant could not even remember how many hours of sleep she averaged one week – she guessed it was about 3 or 4 hours per night. Over time this will most likely become problematic for her well-being and ability her ability to care for others. Our embodied brains are finite and need proper restoration and renewal to function well. However, rest and relaxation are counterintuitive and counterproductive in the dominant cultural milieu of productivity in the United States. This is particularly true for the pastors and pastoral caregivers in this study.

In a previous chapter, I mentioned how one participant appreciated the emphasis on rest and renewal in this study because she needed "permission" to do this in her life. She has been taught that it is not okay for her to think about her own needs for rest and renewal because this is self-centered and wastes valuable time of productivity. She is not alone. In the pre-program interview, the average work week consisted of 51.67 hours for the participants in this study, excluding one participant who answered with "always." The average night sleep was 6.8 hours and the average self-score for Sabbath taking was 3.0. Each of these areas is out of the recommended zone based on the neurological and physiological literature.

Sleep, particularly uninterrupted, optimal sleep (both deep sleep and REM cycle sleep) is vital to wellness (Clinebell, 1991, p. 98). John Arden, Ph.D., author of numerous books on the brain and Director of Training in Mental Health for Kaiser Permanente in Northern California, which oversees training in twenty four medical centers, describes sleep in four stages and REM (rapid eye movement) (Arden, 2010, p. 127-128). Arden says the first stage of sleep is really a transition from being awake to being asleep and the brain waves are fast. The second stage is light sleep with "theta brain waves"; many persons suffering from insomnia spend most of the night in this stage. Also, this stage increases in duration (a higher percent of the overall sleep time) during periods of stress. Stages three and four are considered "deep sleep" wherein one produces slow "delta brain waves." In these stages the immune system is strengthened, while the bodily functions slow down and rest. REM sleep, the final state of sleep, is sometimes called "paradoxical sleep" because the metabolism goes up and the bodily functions work at almost the same level as in wakefulness during this stage.

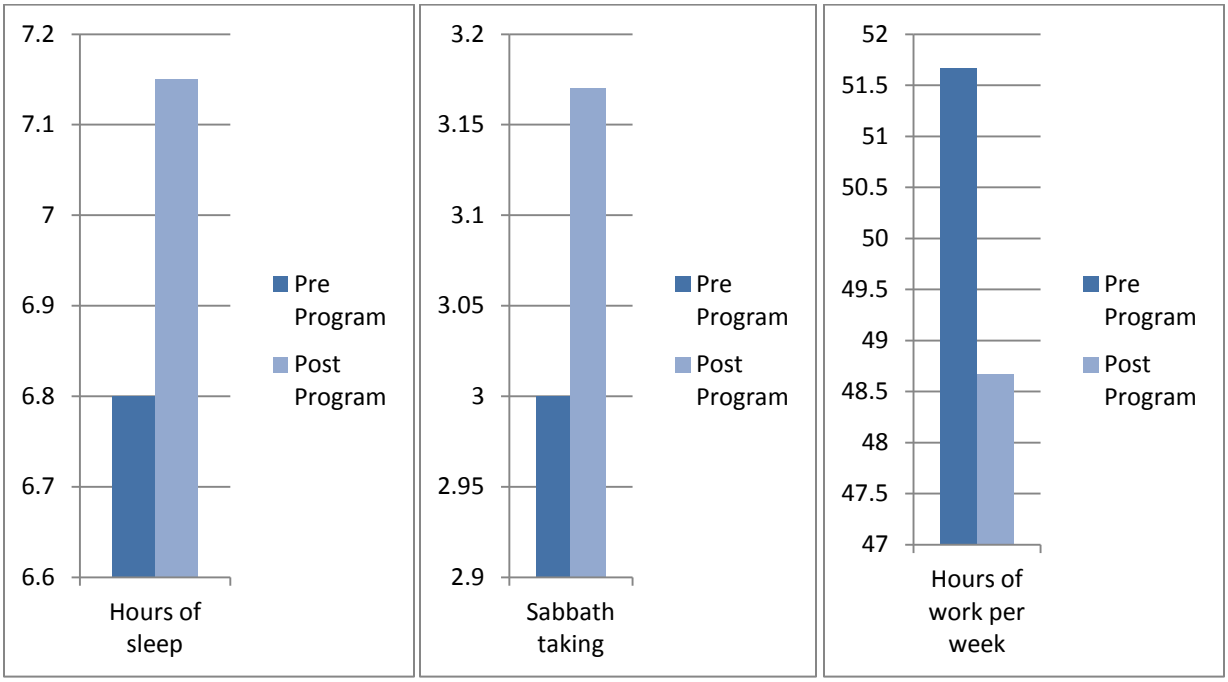
Sleep deprivation has been shown to reduce attention, learning, memory, the body's ability to fight illness and disease, and limit the brain's plasticity (Arden, 2010; Evans &

Burghardt, 2008). Brain plasticity is reduced because without proper sleep the brain does not produce BDNF and other key chemicals sufficiently, and thus, its ability to grow new neural connections is inhibited (Evans & Burghardt, 2008).

Theologically, rest and renewal is often categorized as "Sabbath" in Christian traditions. Sabbath is a topic that could be a dissertation in and of itself; therefore, an in-depth treatment is beyond the scope of this project. For my purposes, Sabbath is simply based on the "day of rest" in the creation accounts in Genesis when God "rested" after creating the world. More specifically, Sabbath-taking provides intentional moments wherein one can rest, reflect on who he or she is and is becoming, and renew his or her calling in life. Pastoral theologian and former professor at the University of Chicago, James Ashbrook, notes how the physiological rhythms of the embodied person – activity, rest, renewal – mirror the rhythm of the Sabbath concept (Ashbrook, 1997). The Sabbath is time set apart for rest, regulation and integration, and renewal.

The participants in study reported different forms of Sabbath-taking. Some of the participants took entire days off of work as a Sabbath and others took blocks of time on more than one day. Likewise, some of the participants described Sabbath as leaving the office completely, while others simply would not answer the phone or check email during this time. The point of the Sabbath taking is not the form or the activity, but to take a break, acknowledge the need for rest, and doing something that is relaxing and renewing. Following the wellness program the participants' reported increases in the amount of sleep per night and Sabbath-taking while reporting decreases in the number of hours worked per week. It appears that the wellness program did impact their understandings self in ways that led to an increased emphasis on rest and renewal. The following chart depicts these changes.

Participant Self-Scores in the Area of Rest and Renewal



Wellness Area 5: Relationships

Life is relational, thus each person needs life-giving relationships to sustain oneself and one's sense of wellness. However, the types of relationships are just as important as the fact that we are relational. The participants in this study named time with spouses or partners, time with children, connections with trusted colleagues, as well as worshipping corporately in their communities of faith as life-giving relationships in their wellness.

Neurologically, we are wired to engage one another through our mirror neuron system and when we learn to recognize and refine this system, we increase our capacity for empathy and build lasting and life-giving relationships. Daniel Seigel states our inherent relational capacity this way:

> We come into the world wired to make connections with one another, and the subsequent neural shaping of our brain, the very foundation of our sense of self, is built upon these intimate exchanges between the infant and his or her caregivers.

> In the early years this interpersonal regulation is essential for survival, but throughout our lives we continue to need such connections for a sense of vitality and well-being. (Siegel, 2010, pp. 10-11)

Siegel goes on to describe that our brains make "me-maps" that give us insight into ourselves, "you-maps" for insight into others, and "we maps" as representations of our relationships (2010, p. 8).

Additionally, numerous studies have been conducted exploring the role and power of relationships on human beings – particularly from a psychoimmunological perspective (a field exploring the interconnections of the immune system, the mind and emotions (Arden, 1996; Cohen, 2004). Meaningful relationships and social interaction has been shown to reduce cardiovascular disease (Lepore, Allen, & Evans, 1993), reduce blood pressure (Spitzer et al., 1992), reduce cortisol levels (Kiecolt-Glaser et al., 1984), reduce cholesterol (Thomas, Goodwin, & Goodwin, 1985), reduce depression (Russell & Cutrona, 1991), reduce anxiety (Cohen, 2004), slow the process of cognitive decline (Bassuk, Glass, & Berekman, 1998), and improve sleep (Cohen, 2004).

In this study, I have made the case that while there is a need to highlight one's intra-relationality, relationship with the various aspects of one's whole, embodied being; we cannot lose sight of the inter-relationality of persons, one's relationships with others and the world. Moreover, it is the very connection of the intra and inter-relationality that I am arguing for; that one's ability and capacity to care for others is absolutely tied to one's ability to connect with and care for self. Constructive theologian and professor, Eleazar Fernandez touches on this well in a description of the "centered self" in *Reimaging the Human: Theological anthropology in response to systemic evil* (Chalice Press, 2004). Fernandez writes:

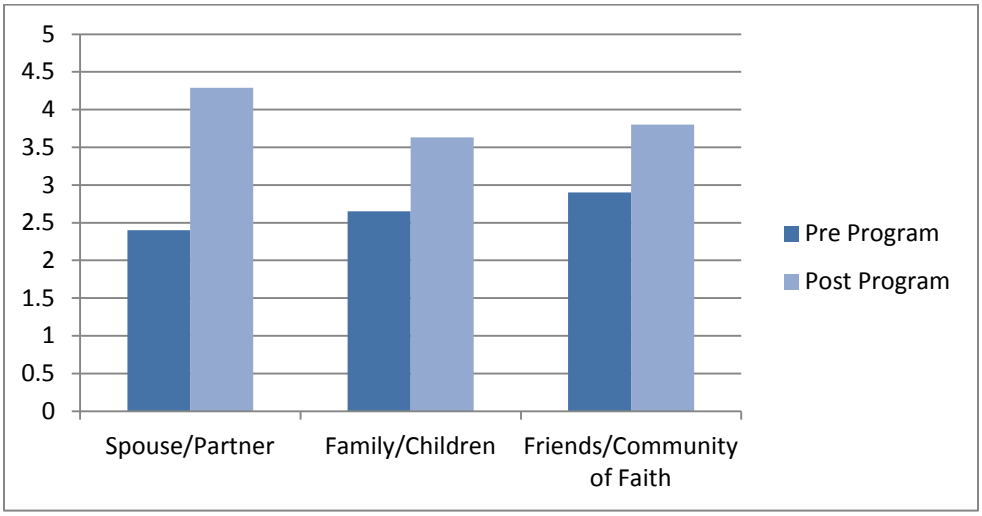
> A centered self is a self that has come to the awareness of other selves or has come to the consciousness of a wider world in which it is a part…the centered self reaches out for relationship and finds the true self only in interdependence with other beings. It is aware that it can view the surrounding world only from the perspective of its own center, yet it sees its well-being only in relation to the well-being of others within the web of interdependent relations. (p. 187)

Additionally, the concept of *Imago Dei* is an important hallmark of human identity – that human beings are created in the very image and likeness of God. Nearly all of the participants named this specifically as they reflected on what makes human beings who/what they are. Taken one step further, the Christian doctrine of the Trinity – God as Three-in-One – reveals that the very essence of God's image and likeness is relationality. Thus, to be in God's image means humanity is inherently relational.[63]

The participants in the study showed increases in inter-relationality as a result of the practices of wellness. Each sub-category of relationships was self-reported to have increased in the post wellness program interview. The following chart illustrates the changes in participant self-scores.

[63] See Catherine Mowry LaCugna, *God For Us: The Trinity and Christian Life*, (San Francisco: Harper Collins, 1991); Ted Peters, *God as Trinity: Relationality and Temporality in Divine Life, (*Louisville: Westminster, 1993); and Mirslov Volf and Michael Welker, (Eds.), *God's Life in Trinity*, (Minneapolis: Fortress Press, 2001) for more in-depth discussion of the Trinity.

Participant Self-Scores in the Area of Relationships



The Central Integrative Force of Wellness: Embracing One's Calling

The central integrative force, or what holds together and orients the five areas of wellness in this theory, is embracing one's calling. There is an inherent teleological impetus which orients and guides the way in which persons embody and enact wellness as whole selves-in-relation-in-context. In other words, the initiative and discipline of developing and maintaining regular practices of wellness is located within the larger context of relationality and thus is not about isolated personal, well-being. Rather, wellness is about connecting the care of embodied, whole self with the care of embodied, whole others. Intra-relationality is inexorably connected with inter-relationality. In short, this telos is the prophetic co-participation with Christ's liberative, empowering, redeeming, and reconciling love that persons are called to embody and enact as, they "live justly, love mercy, and walk humbly with God" (Micah 6:8).

Wellness Areas Summary

Each of the areas of wellness is important in-and-of-itself; however, the real key is in their integration and our ability to keep them in balance. Of course, there is not a magic formula and persons will differ as experience is idiosyncratic, but it does appear, at least generally, that the neuroscientific research and the participants' experience illustrate that an ongoing state of regulation and integration and balance is healthful. Daniel Siegel uses the image of a river with each bank representing an extreme: on one bank is *rigidity* – a state of being stuck in unhelpful patterns or stationary; and on the other bank is *chaos* – a state of unpredictability and being out of control. Between the two banks is the "FACES: (Flexible, Adaptive, Coherent, Energized, and Stable) flow of integration" wherein persons live at "the threshold of the unknown and have the courage to move into new and uncharted waters" (2010, p. 70-71). Siegel then provides eight domains of integration: consciousness, horizontal, vertical, memory, narrative, state, interpersonal, and temporal as the way to live out a FACES flow.

I appreciate Siegel's work and am particularly drawn to his image of integration and the various domains he proposes as "integration" and "balance" which were key elements of the participants' experience of wellness.[64] However, I also appreciate the critique of overly simplified and standardized models of integration, or the "interrogation of integration" as pastoral theologian Pamela Cooper-White has named well in her article, "Interrogating Integration, Dissenting Dis-integration: Multiplicity as a Positive Metaphor in Therapy and Theology" (*Pastoral Psychology*, 2008, 57:3-15).[65] In this article, and others like it, Cooper-

[64] Additionally, Siegel's model is missing a spiritual dimension of integration and thus needs a pastoral theological expansion which includes one's connectedness with God. Therefore, I find the Narrative concept of "storying" and "reauthoring" to be more useful in my theory of wellness.

[65] In this article, Cooper-White critiques normative models of "integration" or "oneness" and proposes an understanding of identity that "explores the multiplicity of persons" interpersonally and intrapersonally.

White critiques the singular "core self" or "soul" view of theological anthropology and advocates for a multiple self, or more accurately an identity constructed of multiple self-states (2004; 2007; 2008; 2011).

Indeed the postmodern self certainly must be cognizant of the many layers of identity which are constructed socially in one's particular context and historical milieu, and are thus dynamic, fluid, and sometimes contradictory with one another. Yet, there must also be some coherent organizing, meaning making quality of persons that give them a sense of self that is different from the other and the world – and that is our embodied, brain ecosystem.[66] In other words, each of us, with our various layers of identity, still comes to know ourselves, others, and the world via our embodied location. In short, we make meaning or "story" ourselves as, and only as, embodied beings.

"STORYING" HOLISTICALLY: MOTOR LEARNING AND TRAINING INDUCED NEUROPLASTICITY

Human beings are meaning seekers and makers. As we encounter ourselves, others, and the world, we make sense of our experience by weaving together the events into a coherent narrative, a story. However, according the social constructionist, narrative theory, "storying" is not simply telling stories about one's life, rather "storying" constructs one's life. We live into the stories we tell. I will examine this concept below as I explain narrative theory and therapy.

[66] Cooper-White does admit this as well, although she qualifies it more than I do. She writes, "The concept of the One (core self) is admissible, but only as one illusory part" (Cooper-White, 2011, p. 153).

Narrative Theory and Therapy

Narrative theory and therapy is a product of the "linguistic turn" and "poststructuralist" or "social constructionist" movements of the postmodern era. The theory is based on the work of Gregory Bateson, Kenneth Gergen, and French philosophers, such as Foucalt, Derrida and Jean-Francois Lyotard. These thinkers saw through the hidden biases and assumptions of dominant discourses and sought to expose the myths of objectivity and name the partiality and situatedness of all knowledge. Thus, as its name indicates, is built on the metaphor of "storying" or "authoring." It is a theory that asserts persons make sense or make meaning in their lives through the stories they tell and the stories that are told about/around them. And these stories shape and construct the realities and identities persons live into. Narrative therapists and authors Jill Freedman and Gene Combs state:

> We think that people's experience of the meaning of their lives and relationships changes through changes in their life narratives. As their narratives change, what they do and what they perceive change as well. (1996, p. 38)

Moreover, such stories and identities are multilayered and infinitely rich in possibilities for new meanings and discoveries. No single descriptor can capture the entirety of the lived experience of such diverse persons in this world. Objective reality has given way to epistemological understandings that are located in particularity, difference, and hybridity. To illustrate the key principles of Narrative theory and therapy, see Table 5.3 below:

Table 5.3 – Key Principles of Narrative Theory and Therapy

1) *Stories and Meaning Making* – persons make sense of their lives through the stories they tell and are told about them. Meaning arises in particular contexts in the cultural milieu as mediated in language. Thus, we make sense of our lives in the context of our social history, shaping stories about the groups we belong to and about how we came to be who, how, and where we are (Monk et al., 1997, p. 34*).*
2) *Language, Knowledge and Power* – Cultures organize their meanings in discourse(s) about how the world should be and thus very much depend on the power relations of who is making those claims and whose interests they serve. Power-laden discourses become the values and assumptions for a culture – and eventually are uncritically believed to be Truth. However, from a postmodern and poststructuralist philosophical stance, Narrative does not support this objective Truth claim and views life as multistoried and multilayered; therefore, no single account is able to capture the entirety of something objectively. All knowledge is situated and partial.
3) *Problem Stories* – People are people, problems are problems; people are never problems. People tend to come into therapy with a problem-saturated understanding of themselves and their situation. These dominant stories are restricting and miss significant aspects of the person's experience and local knowledge.
4) *Externalizing and Deconstructive Listening* – A stance to listening that acknowledges the multi-nature to identities and opens space for new meanings and understandings."The meaning a listener makes is, more often than not, different from the meaning that the speaker has intended. We seek to capitalize on this by looking for gaps in our understanding and asking people to fill in the details…Many of the gaps we notice haven't yet been filled in; people must search their experience to find the details" (Freedman & Combs, 1996, p. 47).
5) *Deconstructive Questioning* – A stance in questioning that helps persons unpack the hidden biases and assumptions, based on dominant cultural discourses (dominant knowledges), which inform their stories about themselves. This offers new perspectives and knowledges which challenge the previously held "assumed" givens and help persons situate their narratives in broader contexts (race, class, gender, ethnicity, sexuality, etc.).
6) *Unique Outcomes* – No problem story is all encompassing and thus there will always be places/moments where the person is living that contradict the problem story. Unique outcomes are experiences or glimpses that reveal an alternative story or stories that could not be predicted by the problem-saturated story. Unique outcomes serve as the foundation to begin to build and thicken alternative stories/identities about the person.
7) *Reauthoring* – The process through which the therapist and client thicken alternative stories/identities in the person as they explore unique outcomes in more detail. As they thicken the plot over time and contexts, organizing and giving meaning to these experiences the person changes and lives into the stories they are rewriting about themselves.
8) *De-centered, but Influential Therapist Positionin*g – The therapist is de-centered in the sense that she or he privileges the experiences, concerns, and agendas of the client; and yet influential because the questions the therapist asks are strategic and shape the direction of the conversation.
9) *Re-membering, Outsider Witnesses and Reflecting Teams* – Narrative work acknowledges the systemic nature to life and utilizes interpersonal relationships in the therapy figuratively and literally. Re-membering consists of reorganizing one's "life club" wherein problematic relationships are left out and new helpful relationships are included. Outsider witnesses are persons who attend therapy sessions, as ways to witness the new identities the client is living into. There is also a desire to "spread the news" about the client that is not problem-saturated as a way to further thicken their alternative and preferred core narratives. Reflecting teams are usually the therapist's colleagues who sit and observe the session and then comment about their thoughts and experiences of the client(s) and allow the clients to comment back on their own experiences of the team's comments.
10) *Documentation and Letters* – narrative therapists acknowledge the power of written language and use certificates, documents and letters as ways to continue to thicken the alternative and preferred identities that clients are living. Periodically, the therapist will send a letter summarizing the previous session and noting further wonderings for the client to consider.

From a neurological perspective this storying capacity occurs via the brain's structure and functionality. Pastoral theologian David Hogue touches on this as he describes the "storying" capacity of human beings as mediated by two key brain functions: memory and imagination. Hogue writes:

> We are our memories; the events of life that we recall give us a sense of personal identity and movement through time. For better or worse, we are shaped and transformed by our experiences through the synaptic patterns with which our brains record those experiences. As we recall the stories that have brought us to any given moment in time, we are both rediscovering and proclaiming who we are. (Hogue, 2003, p. 4)

I agree with Hogue's description; however, I also feel the need to add the bottom-up physiological quality of "storying" to this process that tends to be overlooked. In other words, persons story themselves physiologically and unconsciously (bottom-up, starting in the central and peripheral nervous system), and linguistically and consciously (top-down, starting the "command center" of the prefrontal cortex). As such, the way that persons "thicken" or "strengthen" a physiological narrative is through "motor learning" and "motor training," which is a part of "procedural memory."

Motor Learning and Training induced Plasticity

Movement in human beings is a complex, finely regulated, process of coordinated neural signals and recruitment of muscle fibers via the "neuromotor system" (McArdle, Katch & Katch, 1999). The neuromotor system, more commonly called the central nervous system, is really made up of two parts: the central nervous system and the peripheral nervous system (or autonomic nervous system). The central nervous system includes the brain and spinal cord; and the peripheral nervous system includes the nerves that exert their influence beyond the cranial nerves and spinal

cord – where the brain truly becomes "embodied" throughout the body (McArdle, Katch & Katch, 1999). Together the central nervous system and peripheral nervous system provide the "bottom-up" somatic information – voluntary and involuntary – that makes movement possible and meaningful.

Movement is such a typical part of our daily lives that it often goes unnoticed; however, it is certainly not a simple process. A basic task like tapping one's index finger (a common task asked in neuroimaging studies) requires the processing of motor information to flow through the sensorimotor divisions of the basal ganglia and thalamus, such as the primary (M1), supplementary (SMA), premotor (PMC), and cingulate (CMA) motor areas; as well as the cerebellum and its motor associated structures – the somatosensaory motor cortex and ventral PMC (Doyon et al., 2009). Following this, the hippocampus stores the movement in the memory. Over time this movement becomes easier and easier, and is eventually completed with almost no conscious effort. The way this occurs is through "motor learning" or "motor training."

Motor learning and motor training are forms of movement based memory that induce neuroplasticity in the embodied brain. Motor learning "relates to the acquisition of a new skill and is therefore associated with attentional demands and the building of new motor plans and commands" while motor training "relates to the repetition of a learned motor skill, for example, in order to fine-tune or improve this skill" (Bezzola et al., 2012, p. 189). While slightly different, both motor learning and motor training are vital aspects of "consolidation" in motor memory – moving from fragile short term memory to more stable long-term memory (Brashers-Krug, Shadmer, & Bizzi, 1996, p. 252). Eventually, such motor memories are "automatized" or "when actions are carried out effortlessly with little attentional resources needed for their successful completion" (Doyon et al., 2009, p. 62).

Another way to think about the automatization process is that the movement, the procedural memory, becomes embodied. In fitness circles this is often referred to as "muscle memory" and is used to describe increases in performance (strength, efficiency, endurance, or expertise). For instance, the first time one attempts a lay-up in basketball, to perform the bench press, or run a mile, his or her embodied brain will not be as skilled in this particular activity. Through practice, one becomes more skilled as the memory of this particular movement is processed and stored, and is thus able to increase his or her ability and capacity for that particular skill. After repeated practice and training, one becomes so efficient and skilled, the movement or activity occurs nearly unconsciously. The embodied brain has "automatized" the neuromotor process of this particular skill or activity and moved it from an initial fragile memory to a long-term embedded/embodied memory.[67] The result: neuroplasticity. In other words, the embodied brain needs to adapt and change in response to the motor learning process in order to meet new requirements (Bazzola et al., 2012, p.189).

Research has shown that anatomically motor learning and motor training (in both experts and novices) leads to increased grey matter volume, changes in white matter architecture, and neural wiring adaptation (Schlaug et al., 1995; Gaser & Schlaug, 2003; Imfeld et al., 2009; Bezzola et al., 2012). Motor learning and motor training have been shown to induce neuroplasticity in both "expert populations" such as highly trained musicians and athletes, and "novice" populations (see Bezzola, et al., 2012). In fact, neuroplasticity occurred in novice golfers even while only mentally rehearsing a slow motion golf swing and not actually moving their arms and bodies. This led the study's authors to conclude that even low-to-moderate

[67] Two examples to help illustrate this process are learning to type and riding a bicycle. In each case, one must learn the neuromotor process for each skill/activity; however, once one has done this activity enough times it becomes ingrained and performed without conscious effort and focus. The procedural memory is embodied in long-term memory. Psychologically, this is commonly called "internalization" – the process whereby beliefs, values, and commitments are embedded within one's "self."

intensity leisure activities might be valid intervention types to induce structural and functional neuroplasticity (Bezzola et al., 2012). This study also illustrated that motor learning/training induced neuroplasticity is not strictly task specific; rather "an active lifestyle, comprising regular physical activity, delays the clinical onset of dementia," and cardiovascular fitness in the elderly is related to good cognitive abilities – particularly in the executive control processes (Bezzola et al., 2012, p. 194). Moreover, as I illustrated in chapter four, research has shown that similar practices of wellness (an active lifestyle, cardiovascular fitness, movement, etc.) help regulate the key neurotransmitters serotonin, dopamine, and norepinephrine (which are vital in one's thoughts, mood and emotions); help regulate cortisol (the key chemical is the stress response); and increase the proteins which build the growth factors in the brain (BDNF, VEGF, and IGF-1). All of which lead to changes in brain structure and functionality and one's sense of identity in a process I call "holistic storying."

The participants of this study demonstrated holistic storying through practices of wellness: from Rev. Burke who reauthored a sense of embodiment seeing a connection between his care of self to the care of his daughter, to Rev. Jones who reauthored her identity as an embodied being that needs to take time for rest, to Rev. Dykstra who stated that he feels most well and "good" about himself when he's added physical activity and good nutritional choices, and to Rev. Kim who built in eating one nutritious healthy meal per day into her annual covenant. Each illustrated a new, holistically storied, sense of identity which provided a greater sense of connection with self, connection with others, and connection with God. According to neuromotor research, the participants' embodied experience likely reshaped their gray matter and rewired their synaptic connections in meaningful ways through motor learning and motor training.

SUMMARY

In this chapter, I presented my working theory of wellness, noting the importance of the interconnected, fluid and teleological nature to wellness. Additionally, I described how the participants re/authored their identities holistically through regular practices of wellness. The result according to the participant self-reports were increases in sense of connectedness with self, connectedness with others, and connectedness with God. In the next chapter, I conclude this study by revisiting the research questions proposed in chapter two, and asking what implications this research might have on theories and practices of pastoral caregiving.

CHAPTER SIX: CONTRIBUTIONS AND IMPLICATIONS FOR PASTORAL THEOLOGY, CARE, AND COUNSELING

In this dissertation, I explored whether and how new lenses and layers of human identity informed by a critical-correlation of cognate disciplines – most notably neuroscience, narrative theory, and theology – impact one's sense of self, care of self, and capacity to care for others. Furthermore, I argue that one's capacity for empathy, compassion, and connection in (inter)relationships is directly tied to one's own attunement and connection with the various aspects of one's embodied self – (intra)relationship. These new lenses and layers provide rich resources for theological reflection and practice, including: furthering our theologies of embodiment by attending to the neurobiological processes of self-identity and relationality; illustrating a performative and transformative capacity of persons as active, agentic authors who utilize their entire being in storying themselves; advancing our awareness of attention to issues of difference and contextuality; and naming the direct correlation between the care of self and the care for others. I will touch on each of these aspects in the sections that follow.

In this critical-correlational pursuit, I am mindful that each of the above named disciplines begins from very different philosophical foundations in their understandings of identity and relationality. Thus, the correlation takes a mutually critical stance and allows each discipline to come to the conversation on its own terms to critique, refine, and enrich the others, knowing that the resulting knowledge provides greater nuance to our understandings, theories, and practices. As expected, what I found through this research is that this interdisciplinary dialogue does indeed point to a number of intriguing implications for our understandings of

theological anthropology, as well as our theories and practices of pastoral care and counseling – with both self and the "other."

In this chapter, I will highlight these implications using the image of a kaleidoscope as way of naming the complexity of human identity and relationality.[68] I find a kaleidoscope a useful image because it highlights the complex, dynamic, and multilayered quality to our identity as a (whole)self-in-relation-in-context. As I highlight the various ways of looking at ourselves, it is as if we are rotating a kaleidoscope and emphasizing a different lens, or constellation of lenses, and the result is a wonderfully complex and dynamic new image of colors, patterns, and layers which we had not noticed before. It is as if we are seeing ourselves anew and thus able to notice different nuances and gradations of our identity.

Using the kaleidoscope image, I have developed four organizing categories, or constellation of lenses, for re/thinking the human person. They consist of: (1) multilayered, embodied ontology, (2) intra/inter-connected relationality, (3) performative and transformative capacity, and (4) prophetic teleology. Of course, given the complex and hybrid nature to our identities as human persons, these categories are not mutually exclusive of one another; rather, they mutually inform and reform one another in dynamic, ongoing ways. Yet, categorizing them allows for a more nuanced and developed presentation. Additionally, we must remember that no matter which particular constellation of lenses we use, there will always be a certain amount of mystery to persons. Neuroscience continues to expand the ability to map the brain's activity in various experiences; however, even as new discoveries expand understandings, most neuroscientists readily admit that there are many things we simply do not know – and likely will

[68] In the text, *The Practice of Pastoral Care: A postmodern approach* (Westminster John Knox, 2006), Carrie Doehring uses a kaleidoscope metaphor for viewing "social identity" and names how the different features of one's social identity are reconfigured as one moves from context to context (pp. 101-103). I am adapting and extending this metaphor to also name the multilayered quality of one's intra-relationality in addition to inter-relationality.

never know. While some neuroscientists allow room for this mystery and even refer to that which is beyond empirical verification as "religious" or "spiritual" experience (see Newberg, 1999, 2000; Beaureagard, 2007; Bergemann et al., 2011), for others, the quest to map all realms of experience neurologically remains compelling. In contrast, those of us in theological circles tend to be much more comfortable with the unknown and embrace the mystery of persons as part of the larger mystery of God as "Other." In either scenario, the point is that there are realms of human experience that we simply cannot quantify empirically; yet, these moments are profoundly meaningful in self-construction and understanding. Therefore, I consider the above four constellations illustrative and not exhaustive, and I anticipate further transformations in our understandings, or ways of looking at identity and relationality, as the conversation between neuroscience and pastoral theology continues to deepen.

Multilayered, Embodied Ontology

Neuroscience challenges and expands our theologies of embodiment as it illustrates and asserts a profoundly complex and embodied being. Everything about us – our thoughts, emotions, sensations, intuitions, actions, and even our spiritualities – is mediated through a complex, interconnected neural wiring and firing communication system. Furthermore, neuroscientists now know that meaning, identity, and the ability to relate are all constructed in/through/with our physical embodiment (Siegel, 2010). In short, we live and move and have our being, as, and only as, embodied creatures.

I realize that as I make the case for expanding embodiment there is a danger to reduce and essentailize persons. However, while embodiment is normative, attending to embodiment actually raises critical awareness of difference and particularity, and the need to attend to whole

persons contextually. For instance, if the soul/spirit is actually embodied, rather than disembodied, and identity, relationality, meaning, faith, and wholeness/wellness are mediated only through the embodied processes, then issues of justice take on new meaning and importance. Consequently, I am not simply interested in the reality of embodiment; rather, I am urging us to consider the particular quality of our embodiment and the way in which we enact our embodiment as human persons.

More specifically, I am interested in naming the multilayered and complex quality of our embodied being, and our call to relational justice. There are many aspects to our embodied identity: the brain (including the "skull incased" cortex, limbic region, and brainstem) and the nerves running throughout our central and peripheral nervous systems; the body of organs, bones, and physical characteristics; the mind; and the spirit/soul – all of which come together in a dynamic and complex integration of neurobiological and self-reflective properties. Given this complexity, no single descriptor of the human person will suffice; rather, each particular person combines the various aspects for a unique constellation of identity in her or his context. Each story is but one account, one layer, of the multiplicity of our lives and identities, which we inhabit and enact at various points. Thus, one's identity cannot be constructed flatly, but is situated within the web of human relations in the system/social structures (Miller-McLemore, 1993).[69] As a result, our pastoral theologies of embodiment must attend to contextuality and particularity and work against systems and power structures that devalue and/or oppress certain forms of embodiment. In short, a pastoral theology of embodiment reveals how we are called to

[69] Practical Theologian, Elaine Graham, discusses how some feminists tend to shy away from embodiment because it has been used to further denigrate women to a lower status than men – women are equated with the lower non-rational, profane body, while men are equated with the superior rational mind. In her article, "Words Made Flesh: Women, Embodiment, and Practical Theology," Graham writes, "Many feminists have shown themselves nervous about women's embodiment because it is associated with all manner of patriarchal theories of female inferiority, whether that be hormones, maternal instinct, penis envy or brain deficiency" (Graham, 1999, p. 112).

care for the whole person contextually, and that includes liberation from systems and structures of oppression.[70] I will return to this theme in the later section, "prophetic teleology."

Expanding a pastoral theology of embodiment is also important because it deconstructs the lingering dualistic residue in Christian theological anthropologies and reconstructs a holistic, embodied being as the human person. In so doing, it empowers persons to reclaim the "goodness" of the entire being and trust the wisdom of the body. No longer are emotions, sensations, and intuitions suspect of the more "logical" and "rational" faculties of the mind because every thought is actually constructed in/through/with the body. As such, expanding embodiment avoids the danger of self-alienation, opens possibilities for "other" ways of knowing and local knowledges, and identifies new ways of experiencing oneself and God. Often our "intuitions," "sensations," and "gut senses" are the seat of profound spiritual experience. If we continue to ignore the embodied quality to our being, we risk limiting our ability to connect with self, others, and particularly with God.

As mentioned previously in chapter one, expanding a theology of embodiment also opens our awareness to finitude, limitation, and vulnerability in helpful ways. For instance, there is a certain measure of brokenness and dis-ease as part of living well as human persons. In light of this, we know that being "well" does not necessarily mean being without symptoms or difficulties (Kornfeld, 1998). We know that chronic illness, disease, disability, and death are all parts of living well in this life. We know that wellness is more about the ongoing pursuit and hope-filled future, than a destination in which to arrive.

[70] Embodied difference touches on the challenge of wellness in a multicultural context. One participant from a "collectivist" cultural background (as he describes it) named how this wellness model was helpful, yet it also did not adequately reflect his cultural worldview. He felt it was overly individualistic with too much focus on self.

Intra/Inter-Connected Relationality

Both neuroscientific and theological literature is clear that human persons are essentially and inherently relational. However, we must also ask what is the particular quality of this relationality? Throughout this dissertation I have proposed an answer to this question through an understanding of human persons as intra/inter-relational. In using this term, I emphasize not only the two elements of relation – with self (intra-relationality) and with others (inter-relationality) – but their enduring connection. The ability to embody and enact just ways of inter-relational connectedness (loving and caring for our neighbor) is directly tied to our capacity for intra-relational connection (loving and caring for ourselves). This connectedness flows in both directions – we come to know ourselves better as we are known in relationships and vice versa. Within intra/inter-relationality I see two areas with possibilities for pastoral theology, care, and counseling: (1) the importance of self care through regular practices of wellness, and (2) mirror neurons and empathy.

Intra-Relationality: Self-Reflectivity, Reconnection, and Regulation in Self-Care

Attunement is the term that neuroscientists use to describe one's ability to relate and "tune in" – with oneself and with others. In intra-relationality attunement is a process of reflection and reconnection with ourselves wherein we "check-in" with the various aspects of our embodied selves – our bodily sensations, our mental images, our emotional state, our thoughts, and so on (Siegel, 2010). The key component in attunement with self is self-reflexivity. A self-reflective capacity trains us to be able to be aware of awareness itself and pay attention to our own intentionality (Siegel, 2010, p. 86).

Within self-reflexivity are key components of reflection, reconnection, and regulation. Previously I discussed the unconscious sympathetic processes of escalation which occur during the fight-flight-freeze response. In this process, the neurochemical, cortisol, is released to prepare us for action – and sometimes for survival. This nearly instantaneous process is absolutely necessary for life and wellness. However, if our embodied brain remains on high alert chronically, cortisol becomes toxic. Thus, the counter-process – the parasympathetic process of de-escalation – is also vital. This is the process wherein our brain secretes GABA (gamma aminobutyric acid) and other chemicals to counteract cortisol. The ability to be aware of each process and utilize self-reflective practices of wellness to self-sooth is known as regulation and integration. Essentially, attunement with self is how we regulate and dynamically integrate the myriad of experiences and information that our embodied brain ecosystem is constantly producing.

Attunement with self is vital because it prepares us to connect with and attune to others (Siegel, 2010). In other words, our awareness of and ability to connect with another person's internal world of meaning depends on how well we know our own (Siegel, 2010, p. 62). The key to this process is the insular cortex, a part of the brain called the "middle prefrontal cortex" which is folded deeply within the cerebral cortex (Siegel, 2006; 2010). The insular cortex is known to be influential in many aspects of consciousness, but most specifically in emotional states and bodily states, such as the heartbeat, blood pressure, and sensation of pain (Critchley et. al., 2004; Lamb et. al., 2006; Baliki et. al., 2009). In light of this, the insular cortex is considered by some neuroscientists to be the superhighway of information flow between the mirror neurons, limbic region, brain stem, and the central nervous system (Siegel, 2010). The insular cortex is described in this way because it is the region of the brain responsible for what some scientists

call "emotional contagion," or why we can resonate emotionally and physiologically with others – our respiration, blood pressure, and heart rate can actually rise and fall in sync with other's around us (Siegel, 2010, pp. 61-62). This is why and how we feel heaviness and sadness when sitting with someone who has suffered a loss, or why we smile and feel happy when another person smiles at us. Meaning, in short, is that inter-relationality is interwoven into the very fabric of intra-relationality and visa versa.

Inter-Relationality: Mirror Neurons and Empathy

As mentioned in our overview of the brain in chapter four, one of the more recent developments within neuroscience is the study of the social or inter-relational brain. Social neuroscience developed as a sub-field within neuroscience as researchers began to draw on cognitive and social psychology, development neurobiology, and physical anthropology in their efforts to study the processes and structures the brain employs in human relational processes (Insel & Fernald, 2004); as well as how the social context shapes the development, function, and structure of the brain (Cacioppo et al., 2007; Hogue, 2010).

The most exciting and promising discovery within social neuroscience for pastoral theology, care, and counseling is the way in which the mirror neural processes shed light on empathy.[71] I briefly described the discovery of the mirror neurons in the Italian laboratory with macaque monkeys in chapter four. Mirror neurons are brain cells that "re-create" the experience and emotions of others that we observe within us (Iacoboni, 2008, p. 5). It is as if we are trying on the other's experience or "mirroring" his or her internal state, activity, and response. For

[71] Not every neuroscientist makes the direct connection between mirror neurons and empathy. Pastoral theologian David Hogue has written about the neuroscience of empathy and notes that some researchers include the mirror properties as part of the larger complex capacities human beings have to understand and relate to those around us (Hogue, 2010).

example, as I observe someone smiling, my premotor mirror neurons automatically and unconsciously fire in a way that reconstructs that smile on my face, as well as registering how my body feels making this gesture (Hogue, 2010).

As social creatures, this mirroring capacity is vital to our ability to relate to others and the world around us. Recent research with persons on the autism spectrum illustrates what happens when the mirror neural system does not function adequately. Impairment in the ability to perceive and connect with the emotional expressions and states of others has been tied to diminished mirror neural activation (Depretto et al., 2006; Siegel, 2006). Additionally, research in developmental and attachment theory illustrates the importance of the mirror neural system in developing secure attachments (Schore, 1994). According to developmental theory, the nurturing caregiver mirrors the child's experiences of joy, pain, excitement, pain and so on, matching them and giving them expression, which strengthen and consolidate the child's awareness of his or her own feelings and embodied presence (Schore, 1994). The child becomes in tune/attuned with him or herself as the caregiver attunes with him or her. In turn, this mirroring ability sets the tone for later abilities to connect empathically as adults (Hogue, 2010).

One particular challenge for pastoral theologians and caregivers as we seek to embody and enact liberative love and relational justice in our inter-relationships is that there is neurobiological research which suggests that our brains are biased to fear the "other" in most persons. It appears that empathy, or the mirror neural system occurs more easily with those who are like us and that prejudice and violence may be partly attributed to dysfunctions in mirror neural systems (Mathur et al., 2010). Perhaps this is simply because we are more familiar with those persons who are similar to us and thus more able "re-create" an internal world of meaning resembling that of the other person. However, this also reminds and challenges us that we must

be increasingly aware and intentional in resisting unconscious and neurobiological based biases and prejudices of persons who differ from us.

Taken together, intra/inter-relationality exemplify that "when we lose the ability to monitor our own internal experience, we lose the ability to comprehend the experiences of others" (Hogue, 2010). Moreover, intra/inter-relationality names how our ethical capacity to see and connect with our neighbor depends on the attuning and mirroring processes of our middle prefrontal cortex. Without both processes functioning well, our capacity for meaningful empathic encounters is limited. The interaction of Rev. Burke and his daughter in chapter three was a powerful example of how empathy is impacted by the mirror neural system. Rev. Burke's embodied brain ecosystem was in a state of dis-regulation and dis-integration and thus his neurons were not firing efficiently or effectively impacting the ability of his middle prefrontal cortex's to identify the cues from his mirror system. Participating in practices of wellness appears to have encouraged a revision in his sense of self to include both intra-relational and inter-relational elements. He named how important it was for him to realize his physical (embodied) limitations and the importance of rest in his ability to be present and to empathize with others – particularly his family. Rev. Burke gained a new concept of "attunement" for his self-understanding as one who is intra-related as well as inter-related.

Performative and Transformative Capacity

Human persons are creative, active, and agentic authors who construct meaning and identity performatively, which, transforms the self. In narrative theory this process is known as "storying." In this dissertation, I extended our storying capacities to include the entirety of our embodied being. We story ourselves holistically – linguistically and consciously, and

physiologically and unconsciously. As we saw in the last chapter, pastoral theologian, David Hogue, captures the first part of this process using the brain processes of memory and imagination (Hogue, 2003). However, it is necessary to supplement this "top-down" understanding with a with a "bottom-up" one of the neuromotor processes of motor learning and motor training because our narratives of self are always embodied and the body has constructive capacities.

This capacity is what I call "holistic storying," which names the fact that we actually author ourselves performatively through our embodied beings. James L. Griffith, professor of psychiatry at the University of Mississippi School of Medicine and Melissa Elliot Griffith, director of the Family Therapy Program at the University of Mississippi School of Medicine, touch on this in their work on "mind-body problems" using narrative theory and ethological pharmacology.[72] In their text, *The Body Speaks* (Basic Books/Haper-Collins, 1994), they describe how problem saturated self-narratives are intimately connected to somatic symptoms and hold a person in a double bind that silences both verbal expression and expressions of the body (p. 113). In other words, self-narratives like "I am a bulimic," or "I'm a depressive type person" are literally located and felt within the body in what the Griffiths call "emotional postures" of somatic symptoms. Within the Griffiths' theory, their task is "a search for counter-practices, effective antidotes that disable a destructive story's bind on the body" (p. 118). These counter-practices "are new habits, rituals, and lifestyles that obstruct participation in a destructive story" (p. 118). In turn, counter-practices produce "emotional reposturing" in life-giving, rather than destructive ways.

[72] The Griffiths describe ethological pharmacology as "the planned effort to bias the occurrence of particular classes of social behavior, such as increasing assertiveness or diminishing irritability, by resetting these brain systems with medications" (1994, p. 184).

The Griffiths touch on physiological authorship; however, their approach while acknowledging that the constructive capacity flows in both directions – "language is a complex form of gesturing, a way of touching the body from a distance. Language can reconfigure the physiological state of the body and vice versa" (p. 184) – focuses on the pharmacological way of changing physiology. In other words, while acknowledging that "changing physiology can create new possibilities for change through language," the initial source of the physiological change is medication (p. 188). For example, in treating a careseeker with panic attacks, a medication to "turn down the sensitivity of the brain's systems for monitoring threat" such as Xanax, causes alterations in the noradrenergic and GABA systems, which would create a new "emotional posture" (p. 188). The process is correct, yet I fear that in this approach we are overlooking the power of the physiological to "write (with) the body."[73] By this I mean that the neurobiological research reveals that we can actually do the very same thing that the psychotropic medications do through regular practices of wellness via the neuromotor processes. We change the structure and function of the brain through our experiences and practices. This is not to discount the usefulness and appropriateness of medications in some circumstances, but to expand our thinking about and the scope of our authorship.

In chapters four and five I described how brain function and structure are altered by key neurochemicals produced and secreted through practices of wellness such as cardiovascular physical activity. Furthermore, I illustrated how even the thought of an activity such as a golf swing changes the structure and function of the brain in ways that increase in well-being. This is physiological, neuromotor induced neuroplasticity. The result of this type of neuroplasticity

[73] I use this term as a play on the concept of "writing the body" in feminist theory using social constructionist understandings. Practical Theologian, Elaine Graham, names how feminist thought is reclaiming embodiment and using this concept to describe "a new way of configuring the relationship between bodily representation and identity" (Graham, 1999, p. 112).

suggests transformations in self-narratives and one's sense of his or her (whole)self-in-relation-in-context.

Recent studies in the neuroscience literature reflect motor trained induced neuroplasticity as well. They show how physical activity and exercise are vital components to not only treating, but preventing depression and anxiety (Evans & Burghardt, 2008; Ratey, 2008). Additionally, as we saw in chapter one, studies suggest that meditation and prayer temporarily alter the neural input to the parietal lobes of the brain, which are responsible for locating ourselves in time and space and distinguishing ourselves from others (d'Aquili & Newberg, 1999; Hogue, 2010). The result of this alteration in brain function is an experience of complete loss of the distinct self and a state of "Absolute Unitary Being" (being at one with all of creation), which contributes to an increased sense of altruism and compassion (Hogue, 2010). Researchers speculate that in addition to greater capacities for caring for others, persons who meditate regularly tend to live longer and have fewer health issues (e.g. the "Nuns of Mankato," Snowdon, 2001, 2003).

There are two meaningful aspects of the performative and transformative capacities of identity for pastoral theology, care, and counseling. The first is the performative quality to our rituals and practices of faith and caregiving, and the second is the previously mentioned eschatological hopefulness of neuroplasticity. First, every act of faith whether clinical, liturgical, kerygmatic, prophetic, inter-personal, or intra-personal is embodied and performed (Hogue, 2003; Graham, 1999). Pastoral theologian David Hogue clarifies that, "until we go through the prescribed symbolic actions of the ritual, we have no experience of the ritual or of the grace it makes available to us" (2003, p. 133). The point is that there is a performative and transformative quality to regular practices of wellness; that engaging in such practices has the

potential to rewire our brains and reshape our sense of who we are, how we relate to others, and how we relate to God.

The second important aspect of the performative and transformative capacity is eschatological hopefulness. If every moment and every experience changes the structure and function of the brain (and thus meaning making processes and one's sense of intra/inter-relational identity), then one is no longer "stuck" in any particular place of pain or suffering. No matter the circumstances, there remains a certain hopefulness that embraces the "paradigm of plasticity" and one's agentic and performative ability to reauthor his or her identity in life giving ways through intentional practices of wellness. For Christians – and particularly for pastors and pastoral caregivers – this capacity for transformation is part of, and in partnership with, God's liberative love, sanctifying power, and grace in our lives. Ultimately, our performative and transformative capacity, challenges our theories and practices of pastoral caregiving to expand our repertoires to include "preventive" approaches in addition to "restorative" ones.

Prophetic Teleology

For Christians – particularly pastors and pastoral caregivers – having a vocational direction, or telos, is part of living well. An important aspect of constructing a self-narrative and identity that is meaningful is to discover one's calling as an imager of Christ. Within this teleological trajectory, a pastoral theological construction of intra/inter-relatedness cannot overlook the normative way in which we are to be related. We are called to embody and enact just, mutual, respectful, and empowering models of relationality, working intentionally to resist and remove systems and structures of injustice such as: exploitation, marginalization, powerlessness, cultural

imperialism, and violence (Young, 1990a).[74] Such a stance raises critical awareness of contextuality and particularity for pastoral theologians, wherein persons are viewed systemically and contextually as (whole)persons-in-intra/inter-relationship-in-context. Thus, we must continually challenge ourselves to attend to particularity in all its complexities. Our methods and practices of pastoral caregiving must be versatile and flexible enough to adequately and justly provide multilayered care in complex, particular situations.

Furthermore, attention to issues of difference such as: race, gender, class, socioeconomic status, sexual orientation, and physical ability carry a public theological impetus for pastoral theology, care, and counseling. If we believe that all persons deserve life abundant then our theology must be concerned with, "transformation in the public sphere to enhance healing and justice systemically as well as personally" (Ramsay, 2004, p. 14). Moreover, there must be a "prophetic, transformative challenge" to systems of power that violate and oppress individuals and communities that fuels our visions of wellness (Miller-McLemore, 2004, p. 51).

For pastoral theologians the pubic theological implications are that it does matter who has access to healthful nutritional choices; it does matter who has access to adequate medical care; and it does matter if our social policies favor certain forms of embodiment and ignore others. It matters because each of the above examples is a deeply theological issue. If our "soul/spirit" and "mind" are not separate from our "body," but crucially tied together as part of a multilayered ecosystem, then how we live out our embodied existence in relation with one another is a justice issue. Furthermore, if we are wired together inter-personally as the mirror neural system suggests, and if our personal sense of self is directly tied to our relationships with others, then if one suffers injustice, we all suffer.

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[74] For a more in-depth discussion of injustice see Iris Marion Young, *Justice and the Politics of Difference* (Princeton University Press, 1990). In this text, Young names "the five faces of oppression named above: exploitation, marginalization, powerless, cultural imperialism, and violence" (pp. 39-63).

CONCLUSION

Throughout this dissertation, I have argued that a holistic, embodied model of wellness is useful in reflecting on our sense of identity and relationality; as well as in our quest to love God, love our neighbor, and love ourselves. Neuroscience is a tremendously valuable conversation partner for pastoral theologians in this pursuit and we are really just beginning to learn the implications of this rich dialogue. My hope in joining the dialogue is not that I have provided definite answers to the complex questions of human identity and relationality; rather, my hope is that through this study I have been able to present and ponder new, more nuanced, and potentially better questions about who we are and how we relate with one another and with God. Hopefully, this interdisciplinary dialogue has touched on and enriched ways that we might more adequately image Christ in loving and caring for our neighbor as we love and care for ourselves.

APPENDIX A

PASTORAL WELLNESS PROGRAM

The pastoral wellness program consisted of five areas of wellness with suggested wellness practices under each area, but also encouraged participants to adapt and modify suggestions to fit their contextuality. The framework included:

1. **Attunement** – *with God, yourself, and others*
   - Spend 20-30 minutes in contemplative thought and prayer, utilizing rhythmic breathing and paying attention to your embodiment at least 3 days per week
   - The goal is simply to become mindful of your whole being (mind/brain/body/soul) and fostering the relationship with God and yourself
   - Reflect on what it means to be one created in the very "image of God" (Imago Dei)
   - Focused attention exercises: You might meditate on scripture, pray, journal, or just sit in silence and listen to the spirit of God speak to you

2. **Nourishment** – *spiritual, emotional/psychological, and physical*
   - Each day pay attention to what you are nourishing yourself with
   - Eat healthy foods and an appropriate number of calories as defined by the CDC food guide pyramid
   - Drink 64 ounces of water daily and refrain from excessive carbonated or sweetened drinks
   - Nourish your mind with intellectually stimulating activities and experiences – novelty expands your brain's capacities and abilities – so start a new hobby, brush your teeth with your non-dominant hand, take a new route to work, learn a new skill, or read something by someone who disagrees with your viewpoint

3. **Movement** – *actively participating in some form of physical activity or exercise*
   - Do something physically active for 45-60 minutes to move your body a minimum of 3 days a week
   - Cardiovascular exercise does tremendous things for the wirings/firings of your brain
   - Try to sustain your heart rate at a level where you can carry on a conversation. Please DO NOT OVER EXERT YOURSELF – pace yourself, and take it slow.

4. **Rest and Renewal** – *practicing "Sabbath" and taking time off*
   - Practice Sabbath taking each week
   - Take time away from the office to do something that renews your spirit and vitality
   - Sleep at least 8 hours per night most nights of the week

5. **Relationships** – *acknowledging and enacting our inter-relationality in life-giving ways*
   - Spend at least 1 hour each week with a friend or friends
   - Invite a friend for coffee or lunch
   - Ask a friend to join you in an activity you enjoy
   - Worship and pray with others at least once each week

APPENDIX B

HEALTH HISTORY QUESTIONNAIRE

Participant Name _____ Date _____

Date of Birth: _____

Age: _____ Gender: F / M Height: ____ Weight: _____

Race: _____ Ethnicity: _____

Physician's Name _____

Physician's Phone (___) _____

Are you taking any medications or drugs? If so, please list the medications, dose, and reason.
_____
_____

Have you ever been treated for any psychological conditions? Y / N If yes, please explain_____
_____
_____

Are you currently being treated for any psychological conditions? Y / N If yes, please explain __
_____
_____

Does your physician know that you are participating in this wellness program? Y / N

Describe any physical activity that you participate in somewhat regularly (include the intensity level)_____

How often do you participate in this activity?
_____

Do you now, or have you had in the past:	**(Circle One)**	
1) History of heart problems, chest pain, or stroke	Yes	No
2) History of heart problems in your immediate family	Yes	No
3) Increased blood pressure	Yes	No

4) Any chronic illness or condition	Yes	No
5) Difficulty with physical exercise	Yes	No
6) Advice from a physician not to exercise	Yes	No
7) Recent surgery (in the last 12 months)	Yes	No
8) Pregnancy (now or within the last 3 months)	Yes	No
9) History of breathing or lung problems	Yes	No
10) Muscle, joint, back disorder, or any previous injury	Yes	No
11) Diabetes or thyroid condition	Yes	No
12) Cigarette smoking habit	Yes	No
13) Obesity (as categorized by 20% over ideal body weight)	Yes	No
14) Increased blood cholesterol	Yes	No
15) Hernia, or any condition that may be aggravated by participation in this wellness program	Yes	No

Please explain any "yes" answers below:

_____
_____
_____
_____
_____
_____
_____

APPENDIX C

RESEARCH INTERVIEW QUESTIONS

Theological Anthropology

How would you describe your understanding of the human person…in other words, what qualities, characteristics, and capacities make persons who they are?

What do you think people need when they seek pastoral care from you, and what do you usually do them?

Theory of Wholeness/Wellness

What is your current definition or understanding of "wholeness" and/or "wellness?"

What words, concepts, or phrases help you describe a person who is "whole" or "well?"

When do you feel most "whole" or "well?"

The Five Areas of Wellness

Area 1 – Attunement

Would you say that you are "in tune" with yourself? How do you know?

How do you stay connected to God, and to yourself, in the midst of your ministry?

Area 2 – Nourishment

Are you nourishing your physical well-being? How so?

How you would rate your current practices of nourishing your physical well-being?

1	2	3	4	5
Very low	low	moderate	high	very hi

Are you nourishing your spiritual well-being? How so?

How would you rate your current practices of nourishing your spiritual wellness?

1	2	3	4	5
Very low	low	moderate	high	very high

Are you nourishing your intellectual well-being? How so?

How would you rate your current level of intellectual wellness?

1	2	3	4	5
Very low	low	moderate	high	very high

Are you nourishing your emotional well-being? How so?

How would you rate your current level of emotional wellness?

1	2	3	4	5
Very low	low	moderate	high	very high

Area 3 – Movement

Are you actively participating in some form of physical activity or exercise?

What forms of activities do you participate in (i.e. walking, hiking, running, biking, fitness workouts, dance, gardening, recreational sports, etc.)?

The amount of physical exercise you get on a weekly basis

1	2	3	4	5
Very low	low	moderate	high	very high

The amount of time you actively participate in a hobby?

1	2	3	4	5
Very low	low	moderate	high	very high

Area 4 – Rest and Renewal

Do you practice "Sabbath" taking and taking time off?

How often do you take extended time away from the ministry (retreats, vacations, sabbaticals)?

The typical amount of sleep I get per night is…

How many hours would you say you typically spend doing ministry in a given week?

Area 5 – Relationships

How is your relationship with your family at this moment?

The amount of quality time I spend with my spouse/partner (if applicable)

1	2	3	4	5
Very low	low	moderate	high	very high

The amount of quality time I spend with my children (if applicable)

1	2	3	4	5
Very low	low	moderate	high	very high

Are you fostering friendship, support, and accountability outside of your ministry context?

Are you free to be open and honest in those relationships?

Stress and Overall Quality of Life

Rate your vitality in ministry on a scale of 1-10

Struggling (score of 1)……..…Maintaining (5)……Thriving (score of 10)

Rate your current stress level

1	2	3	4	5
Very low	low	moderate	high	very high

How do you rate your overall quality of life and ministry?

1	2	3	4	5
Very low	low	moderate	satisfied	very satisfied

How do you rate your sense of meaning and purpose in life?

1	2	3	4	5
Very low	low	moderate	high	very high

What resources do you have and draw upon to cope with stress, anxiety, and difficult circumstances in life?

If you felt that you were absolutely thriving in life and ministry how would you be spending your time and energy?

How close is your current life situation to this ideal?

Closing Questions

Was there anything in this interview or project that invited distressing thoughts or feelings?

Do you think it might be helpful to talk further with someone about it?

Additional questions – Used in the post interview only

Did you feel this program was missing anything?

Did you change of the suggested wellness practices? If so, what did you add or take away?

Was this program too long, too short, or just about the right length?

Was this a positive, negative or neutral experience for you?

What is the most significant thing you feel you are taking away from this experience?

What changed, if anything, as a result of this experience? How do you know?

Is there anything else that you would like to share?

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