Brain in love:

With Others, Self & God



In the future fMRI could assess the bedside manner of a potential MD or Chaplin, or measure a prospective spouse's capacity to love. With fMRI scientists are now able to measure brain changes associated with long-term and short term spiritual practice.

Eight Ways to Exercise Your Brain

"Ways" to Enhance Your Physical, Mental, and Spiritual Health

8) Yawn

7) Stay Intellectually Active—Keep learning

6) Intentionally Relax

5) Smile



- 4) Meditate: Formal Practice & Mindfulness
- 3) Aerobic Exercise
- 2) Be in loving relationships
- 1) Abide in Faith, Hope, & Optimism

Heuristic Techniques

This seminar is ordered to help you discovery your path and way. These ideas are tools to help you discover your experiential truth of God

• Heuristic: ("find" or "discover"), sometimes called simply a *heuristic*, is any approach to problem solving, learning, or discovery that employs a practical methodology not guaranteed to be optimal or perfect, but sufficient for the immediate goals. Where finding an optimal solution is impossible or impractical, heuristic methods can be used to speed up the process of finding a satisfactory solution.

A Theology & Theory of Everything

Mindfulness of Biopsychosocial-Cultural-Spiritual Health **Emergent Interactionalism & Divine Causation in a Complex System**



Ecological, Social, Cultural: Risks & Resources Sacred Literature, Spiritual Disciplines, **Pragmatic Theology, & Divine Mentors** (All traditions) Social Economic Status (SES) **Education-Scientific Knowledge High levels of minor stressors** Major life stressors/trauma **Childhood Dev. & Socialization** Social Enrichment/Depravation **Parental/Familiar relationships Biopsychosocial-Cultural Factors Ecological (inter-species) Factors** Micro-organismic balance or infection Atomic/Molecular Nutrition or Exposure

Narrative, Meaning & Faith

What is your Story?

How does your story merge with God's Story?

Practice being a second good story, and a good writer & commentator. Be Mindful of your story, and if necessary rewrite, edit it, or re-remember your story, and thus transforming your brain and the conceptual self with Mindfulness Based Cognitive-Behavioral Change.

Develop outcomes: Love, Joy, Peace, Patience, Kindness, Goodness, Faithfulness, Gentleness, & Self-control

"An unexamined life is a life not worth living." Socrates



Mindful Self Examination

<u>Brain-Based</u> Cognitive-Behavioral Transformation: To Know, Spiritually Manage & Transform our Mind-Heart-Flesh Desires



Praying Your Experiences

Prayer: practicing intentional awareness of God's presence Developmental Tasks—Spiritual Formation: Purification, Illumination and Unification



Physical, Emotional, Intellectual and now Spiritual Fitness: All share one thing-intentional practice.



P. Andrew (Andy) Clifford, MA Physical Ed.; MA Theology; PhD Clinical Psychology; Historical Themes?

Why practice Spiritual Disciplines, Meditation, Prayer & Mindfulness?

- We <u>experience greater intimacy with God</u>—a Loving & Sustainable Intimacy with God, with biochemical markers, and neurocognitive changes.
- We habitually practice & <u>experience increased loving-kindness</u> toward our self & others, with biochemical markers, and neurocognitive changes.
- We develop an <u>ability to identify and change our dysfunctional behaviors</u>—thus renewing our mind-hearts-bodies (rewiring our brains).
- We learn to observe & <u>habitually detach from inappropriate desires</u>, pleasures, greed, and narratives of fear, anger, & distain.
- We experience spiritual <u>Maturity</u>: via purification (less reactive dysfunction), illumination (enlightenment), & unification with God (always feeling loved).
- We <u>experience less physical suffering</u> when physically ill or injured.
- We <u>experience less emotional suffering</u> when emotionally hurt.
- We <u>experience increased physical fulfillment & joy</u> with what whatever situation we find our self in—God's constant presence.
- We <u>experience increased emotional fulfillment & joy</u> with what whatever situation we find our self in—God's constant presence.
- We <u>experience God as being as real</u> as any other person (moment to moment).
- We experience being loved and known by this real God.

Spiritually Based CBT

Spiritually Based CBT Shown To Be Effective for Depression

By Rick Nauert PhD ~ 2 min read

Incorporating a patient's religious beliefs into cognitive-behavioral therapy appears to help relieve depression among patients with a chronic disease.

Duke University researchers discovered the approach is at least as effective as conventional cognitive-behavioral therapy (CBT).

"Integrating religious clients' beliefs into CBT does not appear to significantly reduce its effectiveness, especially in religious clients," writes Dr. Harold Koenig of Duke University Medical Center, Durham, N.C., and colleagues.



Researchers believe the incorporation of spirituality might help to make psychotherapy more acceptable to religious patients with depression and chronic illness.

The study will be published in The Journal of Nervous and Mental Disease.

For the study, researchers evaluated a religiously integrated CBT approach "that takes into account and utilizes the religious beliefs of clients."

Formal Meditation:

"All human miseries derive from not being able to sit quietly in a room alone." Pascal

Centering Prayer

- Set your timer (15-20 minutes, or however long you like)
- Take your posture with an intention of being in a nonverbal/silent state of loving presence with God.
 Self-Empting silent abiding openness to God— Kenosis.
- Focus on your breath or a sacred word. Mind-heart acknowledges/observes/names experiences (thoughts, feelings, memories and sensations) and lets them go (e.g. like leafs on a stream), and lovingly (inner smile) returns to the breath or sacred word. Let go and return to God.
- The intentional concentration and nonjudgmental practice of "letting go" of all thoughts and feelings is often experienced as a death of the possessive self, with the spiritual outcome of intimacy & unity with God.
- Detachment from the conceptual self and its thoughts and feelings: resist no thought, retain no thought, react to no thought, and return to God. Whatever the mind wanders to, whatever surfaces... name it (acknowledge) and let it go.

Welcoming Prayer

- When an event triggers emotional distress: stay with the emotion, name it, breathe and smile (outwardly or inwardly) 5-10 seconds.
- Say a verbal & nonverbal **"Welcome... (up** setting emotions)," with an accepting mind-heart attitude, which will disarm the affect without condoning the situation or trigger. In validating the experience you remove its reactive power. This prayer enhances Godly equanimity, which allows for a Godly response.

Formal Meditation:

Thoughtful Examples

4 Minute Centering

- Set your timer (4-5 minutes, or however long you like)
- Take your posture, and smile within.
- Focus on your breath. Your mind observes, names, (thoughts, feelings, and sensations) and lets them go. (e.g. like leafs on a stream)
- Inhale in The Good (God's loving kindness and grace)
- Exhale with your loving heart-mind "I love you" or
- "I am your child whom You love and adore."
- **"Thank you"** (consider reviewing a list of blessings in your life)
- "I trust you" (with intentional trust and acceptance of God's Love, Provision & Care)
- **"So be it"** (with intentional trust and acceptance of God's Love & purpose)
- **"It is what it is."** (with intentional trust & acceptance of God's Love, and your acceptance of the situation)

Spiritual Mini Retreats

- Set your timer for 1 min (15 seconds to 2 minutes, or commit to 2-10 breaths)
- Take your posture, or be as you are.
- Focus on your breath. Mind acknowledges/ observes experiences (thoughts, feelings, and sensations) and lets them go. (e.g. like leafs on a stream)
- Inhale in The Good (God's loving kindness and grace in the moment)
- Exhale with your loving heart-mind **"I love** you"
- **"Thank you"** (consider the blessings in your life)
- "I trust you" (with intentional trust and acceptance of God's Love)
- **"So be it"** (with intentional trust and acceptance of God's Love that affirms hope and faith in the good)
- "It is what it is." (with intentional trust and acceptance of God's Love, moving bad to neutral, and/or Good)

Formal Cataphatic Examples:

Loving-Kindness

- Set your timer (4-20 minutes, or however long you like)
- Take your posture, and smile within.
- Focus on your breath. Mind acknowledges/ observes experiences (thoughts, feelings, and sensations) and lets them go. (e.g. like leafs on a stream)
- Inhale in The Good (God's loving kindness and grace)
- Exhale with your loving heart-mind "I love you"
- With each inhale bring an image of—a loved one, yourself, a friend, a neutral person, a trying person, a group of people, all beings everywhere.
- Exhale a mind-heart intentional prayer (phrase) — "May you be satisfied and safe, May you be healthy and protected, May you have Love; May you have Joy; May you have Peace, May you abide in love; May you abide in God; (or any version of the above)

Compassion

- Set your timer (5-20 minutes, or however long you like)
- Take your posture, and smile within.
- Focus on your breath. Mind acknowledges experiences (thoughts, feelings, and sensations) and lets them go. (e.g. like leafs on a stream)
- During Inhalation image the following people/ beings—a loved one, yourself, a friend, a neutral person, a trying person, a group of people, all beings everywhere. Focusing on a person for four inhalations and exhalations.
- With the first exhalation, contemplate: "I share your Pain." (Know that this person suffers from time to time)
- With the next breath, contemplate: "May I share your burden." (See the suffering as a dark cloud around them)
- With the next breath, contemplate: "I accept your pain." (Intentionally breathe their suffering into your heart center, with one breath)
- And then with the next breath contemplate: "May you have Safety, Satisfaction, Love, Joy & Peace." (Send compassion back to the person on three intentional breaths --compassion blessings)

Formal Meditation:

Thoughtful Examples

Altruistic

- Set your timer (4-20 minutes, or however long you like)
- Take your posture
- Focus on your breath. Mind acknowledges/ observes experiences (thoughts, feelings, and sensations) and lets them go. (e.g. like leafs on a stream)
- Inhale in The Good (God's loving kindness and grace)
- Exhale with your loving heart-mind "I love you"
- With each inhale bring an image of—a loved one, yourself, a friend, a neutral person, a competitor, adversary or troubling person, all beings everywhere.
- Exhale a mind-heart intentional prayer (phrase)
- You are exceptional. Seeing this person as having a specific exceptional quality or gift
- You give me great joy. Generating the altruistic joy

 being sincerely happy that this person has this
 quality
- May you be a blessing to everyone. Wishing that this quality will be of great benefit to him/her and to all others. Or adapt your own version from the version above

Equanimity

- Set your timer (5-20 minutes, or however long you like)
- Take your posture
- Focus on your breath. Mind acknowledges experiences (thoughts, feelings, and sensations) and lets them go. (e.g. like leafs on a stream)
- With each inhale bring an image of—a loved one, yourself, a friend, a neutral person, a trying person, a group of people, all beings everywhere.
- As you work down your list of people, with each exhalation, contemplate: We are One Family, I accept and embrace all you as brother or sister. Seeing this person as having a general aspect of mixed qualities (pleasant, unpleasant, neutral). Breaking down the any barriers between this person and all beings (this person is not different than others in regard to the human conditionand living beings)
- With the next breath, contemplate: In and through us, God loves...us. With equanimity: being kind, compassionate, altruistically joyful, and without favoritism or preference.
- With the next breath, contemplate with Radical Acceptance & Compassionate Action. May I be of service to you and may God bless you with satisfaction, health, safety, love, joy, & peace. Or adapt your own version from the version above

Praying Our Experiences:

Examen Prayer and Mindfulness based Cognitive-Behavioral Christian Transformation

This is a Jesuits practice that was of the highest priority and benefit. It is recommended that one practice this prayer/meditation at least twice a day for 15 minutes, but many only use the method once a day with journaling. Essentially this prayer is a collaborative examination of one's life over the previous 4-12 hours of that day (or whatever time period). It is practiced typically after lunch, and/or in the evening before retiring to bed. This technique can also be used in group discipleship or Spiritual Direction. The prayer's structure is:

- Thanksgiving: Thanking God for the day's graces and favors.
- Illumination: Asking God for Illumination/insight/discernment to see clearly & compassionately.
- Edification: Surveying one's thoughts and activities and then acknowledging any "sin:" omissions of love, errors in loving actions, and behaviors that offended, harm or upset others. The Way follower is open to the Spirit's compassionate correction and illumination.
- Purification: Then with the loving guidance of the Spirit the disciple repents (returns to the Way) and practices right thought and action (using mental simulator--PFC), and intentionally makes restitution to God, self, others and God's creation.
- Unification: Then with one's Mind-Heart, the disciple accepts loving forgiveness and resolves to live more fully in the presence, power, and intimacy of God's Divine Spirit of loving unification (being & doing) in and through God.

Praying Your Experiences

Developmental Tasks—Spiritual Formation: Purification, Illumination and Unification



Brain Based Cognitive-Behavioral Transformation

The Tripartite Human Brain



Biopsychosocial Brain Transformation: Up-Down Model

Reptilian Brain (subcortical structures): Matures structurally in first 3 yrs. of life. The toddler self.

Responsible for wakefulness, sleep, hunger, fear, rage, pain, fight or flight reactions, satiation experience, addictions, sexual drive, ANS-parasympathic and sympathic. Biblical term of "Flesh."

Paleomammalian Brain: Matures structurally ages 3-12 yrs. in life. The child self. The Limbic system contributes to socio-emotional experience of joy, sadness, anxiety, anger, jealousy; it involves classical, operant, social learning, and gives emotional tone to long-term memories/learning; it contributes to loving bonds, caring for and teaching descents/young, playfulness, & socially oriented communication. It allows for *Us-Them distinctions– aggressive, avoidance and loving*. Episodic & explicit memories begin. Biblical term of "Heart and/or Flesh—the Passions." (Processes of avoiding harms, approaching rewards, attaching to others, and imaginative/narrative play ability develops in cortical areas).

Neocortical-Mammalian Brain: Matures structurally ages 10-28 yrs. The adult self. Functions include: God consciousness, language mediated planning, delaying gratification, impulse control, & problem solving. It greatly influences the Limbic & ANS Systems, but in turn, the heart (limbic system) strongly effects/biases intellectual thought & choices. The adult self can become the Godly Self based on the God Narrative and corrective spiritual neurogenic experience and practice (renewing of the mind-heart). The Biblical term for these brain functions is "Mind and Soul, the knowledge of good and evil," and it is the biblical-conceptual/explicit means of spiritual and psychological transformation. (Processes include: inhibition emotional reactions; mental simulator/planner; intentionally focused attention, intentional perceptions and behaviors; it produces a meaningful narrative of self in time and space, which uses verbal and visual-spatial conceptualizations & maps to affect behavior and emotional states; & it also has a default mode experience—"I in time and space" with steam of conscious involving internal & external sensory awareness-with verbal narrative spin.)

Mindfulness is the intentional awareness of all these brain areas and their functions, for the purpose of participating in God's transformation of our mind, heart and body (flesh), and general culture.

Limbic System: Mammalian Brain

The Old Evolutionary Brain (functionally similar with dogs & primates)



Instinctual & implicitly learned processes and reactions are very quick (≤ one sec.), this system processes dangers, high reward targets, and tribal/family relationships—"Us-Them" schema—memories. It is governed by classical, social and operant learning, and biological drives. It functions subconsciously and is biased by who or what we emotionally love, fear, crave or hate the most (based on our implicit and explicit historical experience/memories). We can explore our subconscious (right hemisphere-limbic) biases by examining our thoughts, emotions, desires, physical states, and behaviors. The practice of formal and informal prayerful meditative disciplines and mindfulness allows us to re-train our brains. God created us with the capacity for neuroplasticity--the brain's ability to recreate (or re-program) itself within a loving (Divine) relationship.

The Cerebral Cortex:

The Evolutionarily New Brain that knows Good & Evil and can Know God, and can be transformed in and through the Neuroplasticity via Brain Based CBT—involving the Practice of the Way.



Brain Transformation: Left-Right Model

God Circuits in our Brains

- 1. Occipital Parietal: In young Children God is a face, and while our images become more abstract with maturity, we all maintain images of God that effect our experience of God.
- 2. Frontal-Right Parietal: Allows us to have the experience of I-Thou with People and God, and with maturity we are able to perceive God as a Real Person in our physical & mental life, and God as being in all things. During some types of meditation can we feel one with God.
- 3. Frontal Lobe (PFC): Integrates all ideas & experiences about God and attempts to answer all the "why, what and where" questions raised by spiritual experience. This area can also activates the Anterior Cingulate. Intentional meditation on being in love with God can be experienced as attachment involving higher levels of oxytocin, vasopressin in the nucleus accumbens and ventral pallidum, and with appropriate sustained levels of dopamine and serotonin, these brain chemicals (neurotransmitters) and brain area functions are associated with long lasting loving attachment to God, and suppression of the amygdala—which triggers survival reactions of fear and anger, and reactionary sin and dysfunction (aggression). (see Brain in Love Figure)
- 4. Anterior Cingulate (ACC): Allows us to experience God as loving and compassionate. It inhibits anxiety, fear, and anger (sometimes guilt) by suppressing activity in the amygdala.
- 5. Frontal Left-Temporal-Parietal: Allows for guiding narratives and conceptual tools that help us communicate (via language) our experience, and then structure our intentional activity in coordinated pursuit of social goals using linear strategies & plans. This area is the SPIN center —rationalization center of the brain, or God-Like Transformative Narrative Coach.
- 6. Striatum-Thalamus: Inhibits activity in the Amygdala, and thus helps us feel safe and relaxed in he presence of God. Contributes to our intentional ability to have a holistic emotional and physical experience of God as objectively real in us and in the Cosmos (experienced intimacy).
- 7. Amygdala: When over stimulated with anger or fear, secondary to trauma, perceptions of threat, or extreme ideology, God can become frightening, authoritarian, and punitive, this experience suppresses the Frontal circuits and thus our ability to think logically and compassionately about God and our enemies. Most God narratives call us to love our enemies.

Brain in love revisited



Love is a Mind-Heart-Soul-and Embodied Experience: It's also a biochemical and neurocognitive addiction, and if your God is loving, it is a great addiction

HOW GOD CHANGES OUR BRAINS 1/2

- Spiritual practices, even when stripped of religious beliefs, <u>enhance the neural</u> <u>functioning</u> of the brain in ways that improve physical and emotional health. The brain is constantly changing, and two weeks of practice makes stable neurological cell changes, in 8 weeks habits. We are what we practice cognitively and behaviorally.
- Spiritual practices that <u>involve relaxation</u> and controlled breathing enhance parasympathetic tone, which lower the emotional and medical damage of stress, by inhibiting the Stress response.
- Spiritual practices that involve <u>simple observation</u>, a PFC activity, and the observing of negative and positive emotions increases Anterior Cingulate (ACC) activation, which decreases activity in Limbic system involving anger, fear, and dysfunctional desires/ cravings.
- **Two weeks** of compassion and relaxation meditative practice strengthen PFC and ACC circuits that generates peacefulness, improved attention, emotional control, social awareness, improved empathy; **at 8 weeks** it starts to slow aging, enhances memory capacity, and increases compassionate action toward others.
- Prolonged practice (years) of contemplation of God and other spiritual values appears to permanently change the structure of brain circuits that control our moods, give experiential efficacy to our notions of God and Self, it improves selective attention, and goal attainment, and shapes our sensory perceptions of God and the world. It leads to our loving experience with God, self and others; it increases compassionate acts, and lessens emotional distress
- Contemplative (Prayer/Meditation/Mindfulness) practices strengthen a specific neurological circuit (PFC-ACC) that generates peacefulness, emotional control, social awareness, improved empathy, while slowing aging, and increasing compassionate action toward others.

HOW GOD CHANGES OUR BRAINS 2/2

- Faith is the most important intentional component for enhancing brain health (both medical & emotional). Faith is defined as realistic, functional and/or imaginative optimism. Faith can add a year to life in terminal illness, improves performance, goal attainment, enhances efficacy of all medical procedures, and faith in God's or one's own efficacy is also strongly associated with mental and physical hardiness (ability to cope with stress). The process involves/exercises the Frontal Lobe and Limbic balance of the brain.
- Peoples' stated beliefs predict nothing about healthy brains, but loving religious practices (application and actualization of specific beliefs involving love, joy, & peace) are associated with emotional, social and physical health—and the Fruits of the Spirit.
- Religious authoritarianism that involves angry/fearful/aggressive religious experiences and practices actually harms compassionate areas of our brains (shuts down PFC and ACC), ages our bodies, and increases chances of illness and dysfunctional behaviors. "The enemy is not authoritative religion; the enemy is anger, hostility, intolerance, separatism, extreme idealism, and prejudicial fear be it secular, religious, socioeconomic, or political."
- Mindfulness Practice: Involves the PFC and ACC, and improves detachment from dysfunction desires and emotional reactions (Mindfulness increases non-reactive awareness, which lowers fear, anger and dysfunctional desires/cravings.)

Embodied Fruits of the Spirit and Brain Systems

Mindfulness Practices & Narratives (Divine Scripts) become Emotional-Behavioral (mind-heart) Realities.

- Love: High PFC-ACC activation, with subcortical-limbic vasopressin and oxytocin circuits activated, High Left FTP love narrative. (An experienced unconditional positive regard for self and others)
- Joy: High PFC-ACC activation, which produced activations in the subcortical-limbic ventral striatum and insula/operculum (a part of the PFC), the key systems of processing hedonic or appetitive stimuli, dopamine circuits are also activated. Sustainable joys are associated with gratitude.
- **Peace:** High Parasympathetic Tone via High PFC-ACC suppression of amygdala, High Left FT narrative (spiritual love, joy, gratitude). (A state of Equanimity)
- **Patience:** High PFC-ACC suppression of amygdala during times of discomfort or frustration, with Left FT narratives of Forgiveness, Optimism & Faithfulness. Intentional practice of Peace (High Parasympathetic Tone) in waiting, and coping with suffering caused by others or situation.
- **Kindness:** High PFC-ACC activation, with Left Hemisphere and PFC Mindfulness Narrative of Loving Action, cueing Right Frontal-Parietal & Frontal Temporal activation, which is experienced as compassion (Compassionate experience & acts to comfort the injured/needy).
- **Goodness:** High PFC-ACC, Right Frontal-Parietal, Right FT activation, experienced as "having done something beneficial to God, Self and Others," or "Doing No Harm." With Left FT Narrative.
- Faithfulness: High PFC-ACC with Strong Left FTP confidence in a Loving Optimistic Future where God is our Mind-Heart-Flesh Fulfillment, with associated loving Right FT/FP--Limbic Experience.
- **Gentleness**: High PFC-ACC activation with enhanced **Empathy** and sensitivity to others, High Parasympathetic Tone (with Kindness and Patience networks activated), with PFC application of Left FT Goodness activation for the benefit of Self or Others.
- Self-control: High PFC-ACC, High Parasympathetic Tone, with Left FT Mindfulness Narrative. GOD-Like Equanimity

HOW GOD REWIRES OUR BRAINS



"The enemy is not authoritative religion; the enemy is anger, hostility, intolerance, separatism, extreme idealism, and prejudicial fear—be it secular, economic, religious, or political."

Mindfulness and Brain Transformation: Recommended Reading





CURT THOMPSON, M.D.

Science can't disprove or prove God



"The New Atheism is locked into a similar kind of literalism. It parasitically lives off its enemy. Just as evangelical Christianity is characterized by scriptural literalism and an uncomplicated belief in a "personal God," so the New Atheism often seems engaged only in doing battle with scriptural literalism. The God of the New Atheism and the God of religious fundamentalism turn out to be remarkably similar entities.

... Physical science, in fact, does not contradict the existence of God."



Even if we were to capture a glimpse of this reality through our detectors, all we would be able to conclude is that the theory makes partial sense: the tool-driven methodology we must use to learn about the world cannot prove or disprove theoretical statements about the ultimate nature of reality.

Generous Orthodoxy:

Dallas Theological Seminary Inerrants to Jesus Seminar Mystics Unite in Practice of Godly Mindfulness



Right Brain Experience of God, Mystical Love of God





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