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Harmony

# THE ART AND SCIENCE OF HEALING:

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# WHAT DO YOU SEE?



# ***WORLDVIEW***

- **YOU SEE A LOVELY WATERFALL**
  - **AT THE PRECISE MOMENT OF SEEING IT, THERE IS ONLY THE SENSE OF GREAT BEAUTY**
  - **WHAT HAPPENS WHEN THE MIND SAYS, “HOW BEAUTIFUL THAT WAS”, “IT WAS NOT AS BEAUTIFUL AS THE OTHER ONE”, “I WISH IT WOULD LAST FOR HOURS”**
  - **CAN WE SEE THE SUNSET WITHOUT COMPARING?**

# THE ART AND SCIENCE OF HEALING

- **PLEASE CONSIDER**
  - A CHILD WITH A NEW TOY
  - HE GIVES THE MIND TO THE TOY
  - TOY ABSORBS THE MIND
    - NO STRAIN, JUST FLOW LIKE DISTANT MUSIC
  - ***THIS IS ATTENTION***
    - ***TOTAL AWARENESS OF INWARD AND OUTWARD THINGS***
    - ***EXCLUDES NOTHING***

# **THE ART AND SCIENCE OF HEALING**

## **– PLEASE CONSIDER**

- YOU GIVE YOUR WHOLE ATTENTION ONLY WHEN YOU CARE**
- WHICH MEANS YOU LOVE TO UNDERSTAND**
- GIVE YOUR WHOLE HEART AND MIND TO FIND OUT**
- RIGHT HEMISPHERE**
  - INTUITIVE SELF**
  - INSIGHT-INTELLIGENCE**
  - SUPERCAUSAL**

# THE ART AND SCIENCE OF HEALING

- **PLEASE CONSIDER**

- **CONCENTRATION**

- **MIND ABSORBS THE TOY AND ANALYZES IT IN ORDER TO CONTROL WHICH CREATES CONFLICT**

- **LEFT HEMISPHERE**

- **EGOIC**

- **EFFORT TO ACHIEVE A RESULT**

# ***WORLDVIEW***

***WHAT IS YOUR WORLDVIEW?***

***HOW DOES YOUR WORLDVIEW  
IMPACT YOUR LIFE?***

***HOW DOES YOUR WORLDVIEW  
IMPACT YOUR CLIENTS?***

# ***WORLDVIEW***

**“BECOMING” OR “BEING”**

**YOU ARE THE CREATOR OF  
YOUR OWN WORLD**

# WHAT DO YOU SEE?



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# ***WORLDVIEW OF THE EGO***

- **GRANDIOSITY is a worldview that demands “I need to be better than you”**
- **When I perceive I am not better than you it leads to anger and/or depression which in turn can lead to judgmentalism, motives, resentments and opinions**
- **When I perceive I am better than you, it leads to elation, enhanced self-image and a lack of empathy**

# **WORLDVIEW**

- **UNCONSCIOUS**
- **Bring the emotional goal into consciousness**
- **Consider “wants” and “needs”**
  - **Example- “I want a new house”**
    - **WHAT FOR?- To be respected and admired**
    - **WHAT FOR?- To be happy**
    - **WHAT FOR?- Because I feel unhappy**
- **Each activity or desire will reveal the basic goal to be achieved is a certain feeling**

# **WORLDVIEW**

- ***THERE ARE NO OTHER GOALS THAN TO OVERCOME FEAR AND ACHIEVE HAPPINESS***
- ***Emotions are connected to what we believe will ensure survival***
- **Emotions are the cause of the basic fear that drives us to seek security**

# ***WORLDVIEW***

**BEHIND THE “I CAN’T” IS...**

**“I WON’T”**

**“I WON’T” MEANS...**

**“I AM AFRAID TO TRY” OR**

**“I AM ASHAMED TO” OR**

**“I HAVE TOO MUCH PRIDE TO TRY  
FOR FEAR OF FAILURE”**

# **THE ART AND SCIENCE OF HEALING**

***WHY DO WE SUFFER?***

# **THE ART AND SCIENCE OF HEALING**

- ***THE ORIGIN OF EMOTIONAL SICKNESS (SUFFERING) IS THE EGO AND ITS..***
  - BELIEF THAT OUR PERSONALITY IS THE ESSENCE OF WHO WE ARE
  - BELIEF THAT HAPPINESS IS OUTSIDE THE SELF
  - PERSONAL AND MATERIAL ATTACHMENTS
  - INABILITY TO STAY CONSCIOUSLY IN THE MOMENT

# **THE PLACEBO EFFECT**

***“ONE SHOULD TREAT AS MANY PATIENTS AS SOON AS POSSIBLE WITH A NEW DRUG WHILE IT STILL HAS THE POWER TO HEAL.”***

***Sir William Osler***

# **THE PLACEBO EFFECT**

***INTENTION***

***ENTRAINMENT***

***EMPATHY***

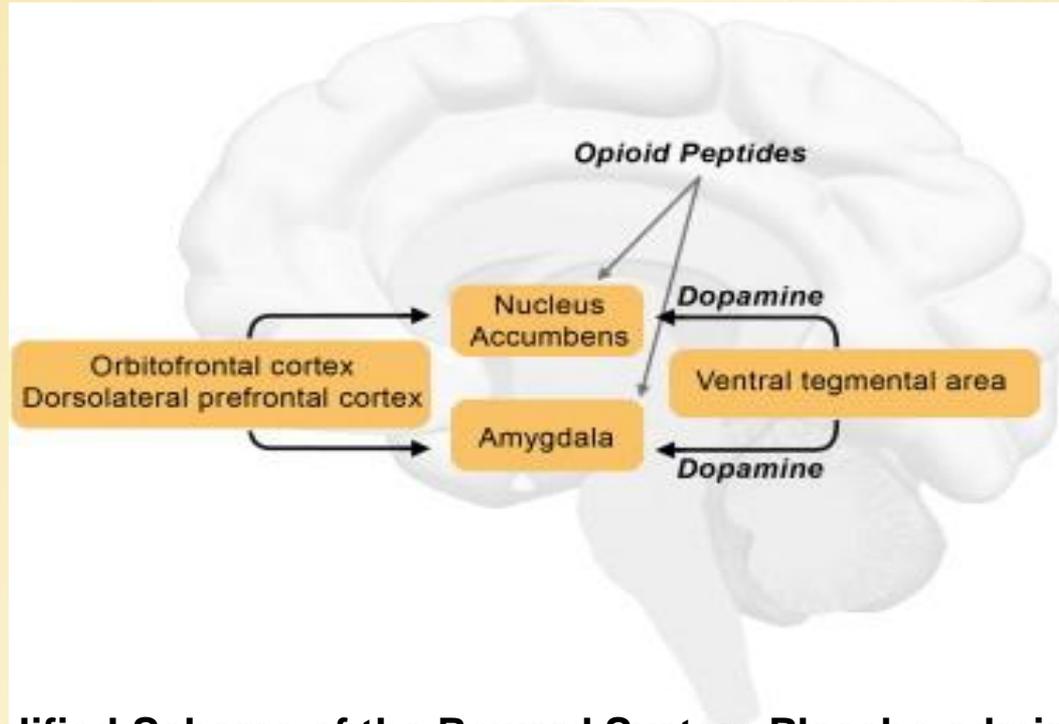
# **THE PLACEBO EFFECT**

- **The prefrontal cortex is the primary site of the placebo response and is necessary for placebo to take palce**
- **Response is mediated by...**
  - **CONDITIONING**
  - **LEARNING**
  - **REWARD**
- **Act by conscious (expectation) and unconscious (conditioning) processes**

# **THE PLACEBO EFFECT**

- **NEUROTRANSMITTERS**
  - Dopamine
  - GABA
  - Cholecystokinin (CCK)
  - Opioids
  - Serotonin
  - Endocannabinoids

# THE PLACEBO EFFECT



**Figure 1 Simplified Scheme of the Reward System Placebo administration has been found to activate both dopamine and endogenous opioid peptides in the nucleus accumbens, thus suggesting an involvement of reward mechanisms in some types of placebo effects**

# THE PLACEBO EFFECT

- **NOCEBO EFFECT**
  - **PLACEBO MEANS “I WILL PLEASE”, NOCEBO MEANS “I WILL HARM”**
  - **HARMFUL HEALTH EFFECT CREATED BY A SICK PERSONS BELIEF THAT A POWERFUL SOURCE OF HARM HAS BEEN ADMINISTERED**
  - **PILLS MAY WORK ACCORDING TO EXPECTATION, NOT PHARMACOLOGY**
    - **RED OR ORANGE MAY STIMULATE**
    - **BLUE AND GREEN MAY DEPRESS**

Reid, *The Nocebo Effect: Placebo's Evil Twin*. *Washington Post*, April 30, 2002.

# THE PLACEBO EFFECT

- **NOCEBO EFFECT**

- **SOME SOURCES ARE:**

- **MEDIA HYPE OF A NEW TREATMENT FOLLOWED BY A SIDE EFFECT SCARE**
- **COLD, IMPERSONAL HEALTH FACILITIES RUN LIKE FACTORIES CONTRADICT THE HIPPOCRATIC OATH**
- **CONFLICT BETWEEN MEDICATIONS FROM BIG PHARMA AND ALTERNATIVE TRADITIONAL TREATMENTS**
- **MEDICAL INFORMATION GIVEN TO AVOID POTENTIAL MALPRACTICE CLAIMS**

Beauregard and O'Leary. The Spiritual Brain. Harper Collins, New York, 2007, pgs. 140-150.

# THE PLACEBO EFFECT

- **NOCEBO EFFECT**

- **Substances or things supposedly hazardous**

- **“Electromagnetic Hypersensitivity” (EMF’s)**

- **Report of symptoms caused by electromagnetic waves such as emitted by cell phones**

- **Symptoms of headache, dizziness, burning or tingling of skin**

- **In clinical trials subjects can exhibit undesirable side effects if they believe they are receiving a placebo**

**Witthoft and Rubin. “Are Media Warnings About Adverse Health Effects of Modern Life Self-fulfilling?”. *Journal of Psychosomatic Research*. 2013;74 (30: 206.**

# **THE PLACEBO EFFECT**

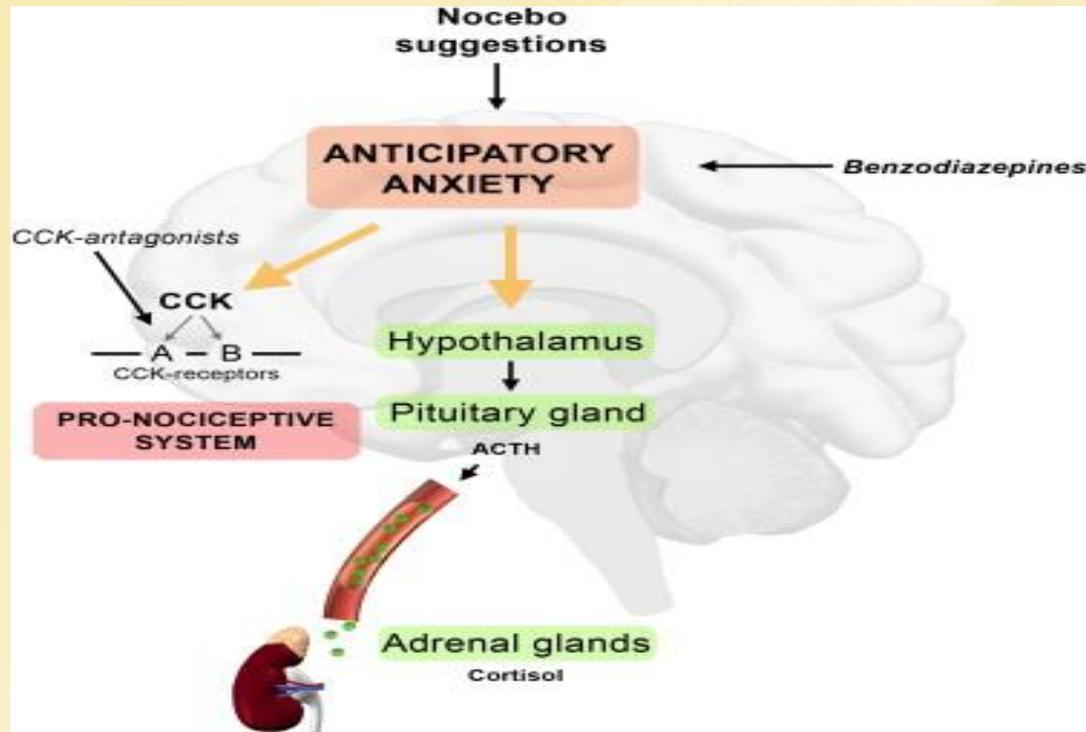
- **NOCEBO EFFECT**

- **Involves the PFC, Anterior Cingulate Cortex and Insula**
- **This neurobiological system amplifies pain and anxiety**
- **Creates anticipatory anxiety working through the Hypothalamic-Pituitary-Adrenal Axis and CCKergic pro-nociceptive system**
  - **Noxious stimuli (pain receptors)**

# **THE PLACEBO EFFECT**

- **Cholecystokinin tetrapeptide (CCK-4) is a neurotransmitter that has high affinity for the cholecystokinin-B (CCK-B) receptors in the central nervous system and may play a role in the modulation of anxiety in animals and humans . An intravenous bolus of CCK-4 reliably provokes panic attacks in the majority of subjects**

# THE PLACEBO EFFECT



**Figure 3 Mechanisms of the Hyperalgesic Nocebo Effect** Nocebo suggestions induce anticipatory anxiety, which activates two independent pathways, the hypothalamus-pituitary-adrenal (HPA) axis on the one hand and a CCK-ergic pronociceptive system on the other.

Paul Enck , Fabrizio Benedetti , Manfred Schedlowski

**New Insights into the Placebo and Nocebo Responses**

Neuron, Volume 59, Issue 2, 2008, 195 - 206

# THE PLACEBO EFFECT

- **Hidden administration versus open administration of cocaine**
  - **Cocaine addicts had 50% less dopamine secretion and experienced less of a high when cocaine administration was hidden as opposed to open.**

**Volkow et al. "Expectation Enhances the Regional Brain Metabolic and the Reinforcing Effects of Stimulants in Cocaine Abusers. *J. Neurosci.* 2003; 23 (36):11461-11468.**

# **THE PLACEBO EFFECT**

- **NEUROBIOLOGICAL MECHANISMS:**
  - Placebos activate neuronal circuits of reward, learning and expectation
  - Similar biochemical pathways
  - Act through conscious (verbal suggestion, desire to get well, hopeful expectation, belief and faith) and unconscious mechanisms (psycho-neuro immune responses, positive transference)
  - Activation/deactivation balance of opioids/dopamine in nucleus accumbens accounts for placebo and nocebo effects

# THE PLACEBO EFFECT

- **Naloxone interferes with placebo analgesia revealing role of endorphins in placebo effect. (Levine et al. “The Mechanism of Placebo Analgesia.” *Lancet*. 1978; 2 (8091):654-57.**
- ***Opioid system is a top-down regulated system***
  - **PFC, ACC and insula along with HYP and amygdala converging on gray matter surrounding 3<sup>rd</sup> ventricle in midbrain (periaqueductal gray or PAG)**

# **THE PLACEBO EFFECT**

- **NEUROBIOLOGY OF NEGATIVE EXPECTATIONS**
  - ACC, PFC and insula activated during anticipation of pain
  - CCK plays pivotal role in pain modulation by antagonizing opioid release and mediating nocebo-induced pain
  - Anticipatory anxiety acts on both the HPA and CCKergic pro-nociceptive system (benzo's block this)

# **THE PLACEBO EFFECT**

**YIN/YANG**

**PLACEBO/NOCEBO**

**OPPOSING EFFECTS OF OPIOID  
SYSTEM (CCKERGIC SYSTEM)**

# THE PLACEBO EFFECT

- **A sample of alcohol-dependent patients received naltrexone, acamprosate or placebo**
  - **No difference in outcomes**
  - **Those who believed they were taking an active medication consumed fewer alcoholic drinks and reported less craving**
- **Double-blind placebo-controlled trials intended to control for the impact of expectancy, *here perceived medication allocation predicted outcome***

# **THE PLACEBO EFFECT**

- **PLACEBO EFFECT:**
  - **A SIGNIFICANT HEALING EFFECT CREATED BY A PERSON'S BELIEF AND EXPECTATION THEY WILL GET BETTER AS A RESULT OF TREATMENT.**
  - **PLACEBO USUALLY HELPS ABOUT 35-45% OF PATIENTS**
  - **A proposed new drug's effect is routinely tested against that of a placebo. If it is 5% better than placebo it can be licensed.**

# THE PLACEBO EFFECT

- **Placebo effect is unpredictable**
  - Give same pill or potion and get different results
- **Pain, insomnia, fatigue, nausea and disturbances of bowel, urinary or sexual function most amenable**
- **Broken bones the least**
- ***Works best in illnesses with strong psychological component***
- ***Pills work best for insomnia; injections for pain***
- **Works by proxy-child gets better if parent believes**

# THE PLACEBO EFFECT

- Utilizes circuits governing expectation, attention and emotion
- On a psychological level it is the active ingredients of *hope, trust and imagination* which are antithetical to the scientific world
- *How does the clinician evoke these active ingredients in the client?*

# THE PLACEBO EFFECT

***“I HAVE WORKED WITH MANY PEOPLE WITH YOUR PARTICULAR PROBLEM AND JUST ABOUT ALL OF THEM HAVE GOTTEN MUCH BETTER. I EXPECT YOU TO GET BETTER ALSO.”***

# **THE PLACEBO EFFECT**

- ***THE PLACEBO EFFECT DEPENDS ENTIRELY ON THE PATIENT'S STATE OF BELIEF***
- ***THE MIND CAN CHANGE THE BIOLOGY OF THE BRAIN***
- ***CLINICIANS SHOULD ALWAYS TAKE ADVANTAGE OF THE PLACEBO EFFECT***
  - ***GREET EVERY PATIENT POSITIVELY***
  - ***BE SUPPORTIVE***
  - ***TELL PATIENT YOU EXPECT THEM TO GET BETTER (NEVER UNDERESTIMATE THE POWER OF HOPE)***

# THE PLACEBO EFFECT

- **Some investigators estimate the placebo effect may account for *as much as 75%* of the benefit of antidepressants(Kirsch I et al, *PLoS Med* 2008; 5(2):e45)**
- ***“If acupuncture alleviates suffering through a powerful placebo effect which theoretically could exceed the total therapeutic effect of conventional therapeutic options, it should be accepted as a useful treatment.”* (Ernst E, *J Int Med* 2006; 259(2): 125-137)**

# THE PLACEBO EFFECT

- (2001) Hrobjartsson of the Nordic Cochrane Center in Copenhagen
- Incredible variation among placebo responses in study of research
  - Little or no improvement where indicators were objective measures like blood pressure
  - *Where subjective reports were utilized placebo was potent*

# THE PLACEBO EFFECT

- **(2001) Hrobjartsson (continued)**
  - *Power of placebo effect evident mostly when improvement is subjective as it is in mental illness*
  - **Treatment has two components**
    - **Actual technique or pharmacological effect**
    - **Placebo component of active treatment**

# **THE PLACEBO EFFECT**

- **(2002) Predag Petrovic of Karolinska Institute in Sweden**
  - **Told volunteers they would receive two potent pain killers by injection**
    - **Placebo and opiate remifentanil**
  - **40 seconds later stimulated volunteers left hand with electrode that either heated to point of pain, gave benign warmth or provided no sensation at all**

# **THE PLACEBO EFFECT**

- **(2002) Predag Petrovic (continued)**
  - **Using PET scans**
    - **Both opioid and saline injections activated brainstem (a seat of the opioid system that mediates pain relief) and rostral anterior cingulate cortex (rich in opioid receptors) and parts of the reward system**
    - **Proposed that placebo might work by triggering cortical areas like anterior cingulate which exerts control over analgesic system in brain stem**

# THE PLACEBO EFFECT

- **(2004) Neuroscientist Tor Wager of the University of Colorado at Boulder**
  - Studied placebo's painkilling effects
  - *Found expectation of relief involved prefrontal cortex (PFC) executive center*
  - After PFC engaged, the activity in pain response areas declined and subjects reported relief
  - *Expectation signal from the PFC tells midbrain to release endorphins to meet the expectation of pain relief*

# **THE PLACEBO EFFECT**

- **(2011) Wager et al.**
  - **Robust placebo effect also accompanied by changes in activity in areas involved in emotional appraisal such as insula, orbitofrontal cortex (OFC) and amygdala**
- **(2012) Wager et al.**
  - **Self-soothing process may require focusing on pain rather than distraction**
  - **Found both the drug and expecting to get the drug (but actually receiving a saline placebo) reduced self-reported pain levels**

# **THE PLACEBO EFFECT**

- **(2012) Wager et al. (continued)**
  - **The expectation component worked via a separate mechanism increasing activity in the PFC and reducing activity in emotional areas**
  - **Whereas drugs influenced the pain processing brain areas more directly and did so later after levels of remifentanil reached peak brain levels**

# **THE PLACEBO EFFECT**

- **(2008) Kaptchuk et al.**
  - **Irritable bowel syndrome (IBS)**
  - **Assigned patients to either acupuncture or waiting list**
  - **Subdivided acupuncture group into no conversation versus heavy dose of attention, empathy and interaction**
  - **Dose response relationship between degree of interaction and proportion of patients who improved**

# THE PLACEBO EFFECT

- **(2008) Kaptchuk et al. (continued)**
  - **Symptoms improved...**
    - **28%-waiting list**
    - **44%-just technique**
    - **62%-attention group**
  - **Empathy**
    - **Providers brain during the act of providing pain relief looked a lot like the response in the patients brain when expecting pain relief**
    - **PFC and insula (an indicator of empathy for pain) involved**

# **THE PLACEBO EFFECT**

- **We have an innate ability to decode emotions by touch alone**
- **Matthew Hertenstein, DePauw University, 2009**
  - **Have the ability to send and receive emotional signals through touch**
  - **Participants communicated eight distinct emotions-anger fear, disgust, love, gratitude, sympathy, happiness and sadness at 78% accuracy (chance would have been around 25%)**

# THE PLACEBO EFFECT

- **Michael Spezio, Scripts College, 2012**
  - Using fMRI to measure brain activation in heterosexual males being touched
  - Shown a video of a man or a women purportedly touching them on the leg
  - Primary somatosensory cortex responded more to woman's touch than to a mans
  - However, the videos were fake as it was always a woman touching them on the leg
  - Suggests the emotional and social components of touch are all but inseparable from physical sensations

# THE PLACEBO EFFECT

- We feel more connected to someone if they touch us although the *context is important*
- Touch strengthens relationships and is a marker of closeness
- *When you stimulate the pressure receptors in the skin you lower stress hormones and at the same time stimulate the release of oxytocin which enhances trust and attachment*
- Even self-massage can slow heart rate and reduce cortisol levels

# THE PLACEBO EFFECT

- The person touching gets the same benefits
- Peter Andersen, San Diego State University and author of *Nonverbal Communication: Forms and Functions*
  - The most important things we reveal through touch are probably our degree of dominance or our degree of intimacy
  - A limp handshake signifies uncertainty, low enthusiasm and introversion
  - A vice-like grip is a sign of domination
  - Doctors, teachers, etc. who are more touch-oriented get higher ratings

# THE PLACEBO EFFECT

- **COMMON MEDIATORS OF PLACEBO:**
  - ***EXPECTANCY***
    - Ego developmental psychology stress importance of early childhood experiences in the way we think about healing. Repeated nurturing interactions with mother important in shaping capacity to self-soothe. This modulates ANS arousal and future emotional well-being. Over time child learns to self-soothe. The healing power of mom is transferred to the therapist
    - **DESIRE + BELIEFS + EXPECTANCY = HOPE**

# THE PLACEBO EFFECT

## – **CONDITIONING**

- Pharmacologically conditioned placebo responses mimic drug effect. Placebo given after active drug are more effective than placebo given for first time
  - Higher the number of administrations of the drug the more robust the placebo response

## – **THERAPEUTIC RELATIONSHIP**

- *The most important component!*
- Patients will “doctor shop” looking for good relationship
- Likeable and credible strengthens expectation

# THE PLACEBO EFFECT

## – *THERAPEUTIC RELATIONSHIP* (continued)

- *The greater the empathy and the greater the amount of positive information shared by therapist to patient the greater the placebo effect*

## – *THERAPEUTIC COMMUNICATION*

- *Give an intelligible account of the problem, the diagnosis and prognosis itself may be a form of therapy*
- *Patients given a specific diagnosis and told they will get better usually do*

# THE PLACEBO EFFECT

## – *MEANING EFFECT*

- When physical characteristics account for more than the chemical ingredients
- Driven by unconscious symbolic or iconic images
  - *Color*
    - » RED:STIMULATING
    - » BLUE:SEDATING
    - » GREEN:ANXIETY REDUCING
    - » YELLOW:ANTIDEPRESSANT
    - » WHITE:SOOTHING

# THE PLACEBO EFFECT

## – *MEANING EFFECT*

- Driven by unconscious symbolic or iconic images
  - *Expense: Costlier is more effective*
  - *Number of pills: more>fewer*
  - *Capsules>tablets*
  - *Route of Administration: subcutaneous>oral*
  - *Setting of administration: observed efficacy open>hidden*

## – *THE HEALING RITUAL*

- Fake acupuncture for IBS enhanced by empathy and supportive conversation could produce adequate relief

# **THE PLACEBO EFFECT**

## **– *PERSONALITY FACTORS***

- **Optimists respond better than pessimists  
Extraverts better than introverts**
- **Openness**
- **Acquiescing personalities who develop positive relationships**

## **– *THERAPIST STRATEGIES***

- **Watchful waiting**
- **Dose adjustments**
- **Changing an aspect of therapy**

# THE PLACEBO EFFECT

## – *THERAPIST STRATEGIES (continued)*

- Switching medications
- Empathic listening-sensitive and caring demeanor
- Encourage patient to participate in clinical decisions
- Therapist who can adapt their goals to patient needs and values
- Clinicians who are optimistic and impart hope
- Perceived by patient as warm, friendly, trustworthy and reliable

# **THE PLACEBO EFFECT**

- **PATIENT VARIABLES**

- **Having an agreeable personality may boost the placebo effect**
- **Enhances endogenous opioids**
- **Being resilient, straightforward and altruistic yields greater reduction in pain with placebo**
- **Straightforwardness and altruism are part of the overall capacity to be open to new experiences and integrate that information in a positive fashion (this may drive placebo)**
- **Being angry and hostile less effect**

# THE PLACEBO EFFECT

- **PATIENT VARIABLES (continued)**
  - Patients with secure attachment histories seem more capable of activating their inner health-restoring mechanisms to get greater benefit from pharmacotherapy or psychotherapy
  - Patients lacking early-life positive caring experiences more likely to have a nocebo response

*Kradin. The Placebo Response and the Power of Unconscious Healing. New York, NY; Routledge; 2008.*

# **THE PLACEBO EFFECT**

- **NONVERBAL (Right brain)**
  - Eye Contact
  - Posture
  - Facial Expression
  - Touch
  - Dress
  - Professional Manner
- **Communicate the therapists inner feelings, attitudes and values**

# **THE PLACEBO EFFECT**

- **NONVERBAL (Right brain)  
(continued)**
  - **Prosody-how something is said**
    - **Strongly influences the autonomic nervous system and hypothalamic-pituitary-adrenal axis through the limbic pathways**
    - **Regulates non-verbal healing responses**
    - **Patient has a desire to be listened to and understood**

# **THE PLACEBO EFFECT**

***“A GOOD DOCTOR TREATS THE DISEASE. A GREAT DOCTOR TREATS THE PERSON WHO HAS THE DISEASE.”***

***SIR WILLIAM OSLER***

# THE PLACEBO EFFECT

- A meta-analysis of placebo-controlled antidepressant studies showed only about a 25% drug benefit and 50% benefit from the placebo component of treatment (Kirsch and Sapirstein. “Listening to Prozac but hearing Placebo: a meta-analysis of anti-depressant medication. *Prevention and Treatment*. 1998; 1(2).

# THE PLACEBO EFFECT

- ***“Psychotherapy research suggests that all bona fide psychotherapies have equivalent efficacy, regardless of the claims of their specific technique touted by partisan practitioners.”*** (Nyak and Pankaj. ***“Enhancing Placebo Effects in Clinical Practice.”*** *Psychiatric annals* 44:2, February 2014, pg.94.

# THE PLACEBO EFFECT

- ***“The psychotherapy research literature reveals the equivalence paradox (i.e. all bona fide psychotherapies regardless of their specific treatment techniques have equally efficacious global outcomes), and that effective therapists behave similarly in conducting therapy irrespective of their theoretical orientation.”***

Wampold, Mondin and Moody. “A meta-analysis of outcome studies comparing bona fide psychotherapies. *Psychological Bulletin*. 1997; 122(3):203-215.

# THE PLACEBO EFFECT

- **Jerome Frank- “Curative Features Common to all Psychotherapies”**
  - *A person in distress*
  - *Emotionally charged interaction with an expert*
  - *A healing setting conducive to a safe, soothing environment that strengthens the expectation of help*
  - *Both healer and patient are invested in the explanation for the condition which insures hope*

# THE PLACEBO EFFECT

- **Jerome Frank- “Curative Features Common to all Psychotherapies**  
**Jerome Frank- “Curative Features Common to all Psychotherapies (continued)**
  - *A healing ritual that allows the healer to show mastery of his technique, win over confidence, further cement the alliance and enhance expectations of a positive outcome*

Frank and Frank. *Persuasion and healing: A Comparative Study of Psychotherapy*. Baltimore, MD: John Hopkins University press, 1991.

# THE PLACEBO EFFECT

- In an oft-cited study (Strupp and Hadley. “Specific versus Nonspecific Factors in Psychotherapy. A Controlled Study of Outcome. *Arch Gen Psychiatry*. 1979; 36(10):1125-1136) university professors with renowned reputations for warmth and trustworthiness but no previous therapy experience as therapists could produce good outcomes comparable to those of therapists with 20 years’ experience

# THE PLACEBO EFFECT

- **112 patients treated by 18 psychiatrists (50% in a drug arm and 50% in a placebo arm) from the NIMH depression collaborative research program revealed *the therapeutic alliance as the largest contributor to improvement in depression. The placebo-enhancing psychiatrists had better outcomes with inert pills than others had with drugs***

McKay, Imel and Wampold. "Psychiatrist Effects in the Psychopharmacological Treatment of Depression". *J Affect Disord*, 2006;92(2-3):287-290

# THE PLACEBO EFFECT

- **“Sustained partnership” with patient (Brody. “Placebo Response, sustained Partnership, and Emotional Resilience in Practice. *J Am Board Fam Pract.* 1997; 10(1):72-74.)**
  - **Caring, empathy and sensitivity**
  - **Ability to adapt medical care goals to patient’s needs and values**
  - **Encouraging patient to participate fully in decision-making**
  - **Confidence, enthusiasm, and affability**
  - **Perception as warm and friendly, trustworthy and reliable**

# THE PLACEBO EFFECT

- ***IN SUMMARY...***

**There is no one "the placebo effect." There are different mechanisms in play across a variety of medical conditions and therapeutic interventions. For example, a placebo effect takes place because there is expectation. The patient expects a therapeutic benefit, and this kind of expectation actually has an effect on the brain and the body.**

# THE PLACEBO EFFECT

- *IN SUMMARY...*

The connection between expectation and real improvement that may occur is due at least to two mechanisms. The first may be a reduction of anxiety. The second is between expectation and the activation of a reward mechanism by the region of the brain known as the nucleus accumbens (which also governs pleasure, reinforcement learning, laughter, addiction, aggression, fear, impulsivity and the placebo effect.)

# **THE PLACEBO EFFECT**

- ***IN SUMMARY...***

**When a treatment is given to a patient, be it a placebo or real, it is administered in a complex set of psychological states that vary from patient to patient and from situation to situation. For example, when a placebo is given to relieve pain, it is administered along with stimuli which tell the patient that a clinical improvement should be occurring shortly. These stimuli can include the color and shape of the pill, patient and provider characteristics and the healthcare setting.**

# THE PLACEBO EFFECT

- ***IN SUMMARY...***

**Recent research has revealed a reduced efficacy of drugs when they are administered covertly to the patient. In fact, if the placebo/expectation component of a treatment is eliminated by means of a hidden administration (unbeknownst to the patient), the psychological component of the therapy is absent as well**

American Physiological Society (APS) (2013, September 19). Placebo effect and lessons for the physician-patient relationship. *ScienceDaily*.

# **THE ART AND SCIENCE OF HEALING**

***HOW DOES SPIRITUAL  
AWARENESS MANIFEST  
ITSELF?***

***INTUITIVE, WORLDVIEW  
CHANGE***

# **THE ART AND SCIENCE OF HEALING**

- **SPIRITUAL AWARENESS...WORLDVIEW CHANGE**
  - **CANNOT BE ACQUIRED**
  - **THERE IS NO PATH**
  - **CANNOT BE ATTAINED BY TECHNIQUES OR PROGRAMS**
  - **COMES TO YOU WHEN CONDITIONS ARE RIGHT**
    - **AN ORDERLY AND MORAL MIND**
    - **A SILENT MIND DEVOID OF “CHATTER”**
- **LEFT/RIGHT BRAIN LATERALIZATION**

# **THE ART AND SCIENCE OF HEALING**

- **LEFT/RIGHT BRAIN**

- **If disconnected from the brain chatter that connects us to the outer world the mind is silent**
- **Lose the complications of the past and future and become overwhelmed by the peacefulness of the moment**
- **The more time we spend in the inner circuitry of our right hemisphere the more peace we project into the world**

# **THE ART AND SCIENCE OF HEALING**

## **• RIGHT HEMISPHERE**

- The Present Moment-Right here and now**
- Thinks in pictures and symbols**
- *Receives sensory information that allows us to understand what the moment feels like, smells like and tastes like***
  - *Sensory collage***
- Connects to the energy all around us**
- We are energy beings connected to everything through the consciousness of our right hemisphere**

# **THE ART AND SCIENCE OF HEALING**

- **RIGHT HEMISPHERE**

- **Designed to remember things as they relate to one another (similarities and relationships)**
- **NO time exists other than present moment**
- **Thinks intuitively out of the box**
- **Connection with something greater than ourselves**
- **Spontaneous and imaginative**
- **Empathic, non-verbal communication**

# **THE ART AND SCIENCE OF HEALING**

- **LEFT HEMISPHERE**
  - **TEMPORAL CADENCE**
  - **ALL ABOUT THE PAST AND FUTURE**
  - **TAKES THE “COLLAGE” AND CATEGORIZES AND ORGANIZES THE INFORMATINAL DETAILS**
  - **THEN ASSOCIATES THIS INFORMATION WITH WHAT WE HAVE LEARNED FROM THE PAST AND PROJECTS IT INTO THE FUTURE**

# **THE ART AND SCIENCE OF HEALING**

- **LEFT HEMISPHERE**
  - **Programs for pattern recognition**
    - **Can predict future based on past patterns**
  - **Judgmental (likes and dislikes)**
    - **Looks for differences**
  - **Constantly comparing us to everyone else**
  - **Literal interpretation**
  - **Left brain orientation association area defines where we begin and end compared to space around us (right places it where we want it to go)**

# **THE ART AND SCIENCE OF HEALING**

- **RIGHT HEMISPHERE**

- **WIDE OPEN ATTENTION TO THE WORLD**
- **SEES THE WHOLE**
- **DEALS WITH NEW EXPERIENCE**
- **CONTEXT AS INSEPARABLE, INTERCONNECTED AND LIVING**
- **RECOGNIZES THE IMPLICIT**
- **OPEN SYSTEM-SEES WORLD AS NUANCED AND COMPLEX**

# **THE ART AND SCIENCE OF HEALING**

- **RIGHT HEMISPHERE**

- ALL THAT IS NON-VERBAL, METAPHORICAL, IRONIC AND HUMOROUS
- AT EASE WITH AMBIGUITY AND IDEA THAT OPPOSITES MIGHT BE COMPATIBLE
- MAKES US SOCIALLY AND EMOTIONALLY SENSITIVE
- TO UNDERSTAND BEAUTY, ART AND RELIGION

# **THE ART AND SCIENCE OF HEALING**

- **LEFT HEMISPHERE**
  - **FOCUSES ON DETAILS**
  - **LIKES PREDICTABLE EXPERIENCE**
  - **ISOLATES WHAT IT SEES**
  - **BLIND TO THE INDIRECT**
  - **CONTROLS THE GRASPING RIGHT HAND**
  - **LANGUAGE**
  - **HELPS US MANIPULATE AND USE THE WORLD FOR OUR PURPOSES**

# **THE ART AND SCIENCE OF HEALING**

- **LEFT HEMISPHERE**

- **DELINEATED AND CERTAIN**
- **CLOSED SYSTEM (DOESN'T GET CONTEXT)**
- **LITERAL**
- **BRINGS DETAIL INTO FOCUS**
- **EVER OPTIMISTIC**
- **RIGID AND RULEBOUND**
- **EXCLUSIVE IN ITS ATTITUDES**

# **THE ART AND SCIENCE OF HEALING**

- **LEFT HEMISPHERE**

- **NEGATIVE FEEDBACK CAUSES IT TO GET LOCKED DEEPER INTO ITS OWN VIEWS**
  - **DOES THE SAME THING IT ALWAYS DOES AND NO MORE**
- **MECHANISTIC**
- **SEES WORLD AS A HEAP OF MEANINGLESS FRAGMENTS**
- **MANIPULATIVE AND REDUCTIONISTIC**

# **THE ART AND SCIENCE OF HEALING**

- **LEFT HEMISPHERIC DECISION MAKING**
  - **DRAWS FROM OUR MEMORY (PAST)**
  - **FUNCTIONS IN A REDUCTIONISTIC FASHION**
    - **LIKES TO LABEL**
    - **REDUCE TO SMALLEST ELEMENT**
    - **SEES THE TREE BUT MISSES THE FOREST**
  - **PROCESSES SLOWLY**
  - **GIVES AN EXPLICIT RESPONSE (ANSWER)**

# **THE ART AND SCIENCE OF HEALING**

- **RIGHT HEMISPHERE DECISION MAKING**
  - **DRAWS FROM IMPLICIT, UNCONSCIOUS MIND (90%) , AFFECT AND THE FIELD OF CONSCIOUSNESS (BASED UPON ONE'S LEVEL OF SPIRITUAL CONSCIOUSNESS)**
  - **HOLISTIC AND FAST**
  - **GIVES AN IMPLICIT, INTUITIVE RESPONSE RESULTING IN A WORLDVIEW CHANGE**

# **THE ART AND SCIENCE OF HEALING**

***IF THERE IS NO PSYCHOLOGICAL TIME  
THERE IS NO CONFLICT. THE EGO IS  
TIME BOUND TO THE PAST AND  
FUTURE. WITHOUT TIME WE WOULD  
BE IN THE PRESENT MOMENT-IN A  
SPACE THAT HAS NO WORDS AND NO  
CENTER AND NO "ME". WE WOULD  
EXPERIENCE PEACE AND JOY AND  
THE IMMENSE ENERGY OF THE  
UNIVERSE***

# **THE ART AND SCIENCE OF HEALING**

**WHEN THE MIND IS STILL, TRANQUIL,  
NOT SEEKING ANY ANSWER OR  
SOLUTION, NEITHER RESTING NOR  
AVOIDING-IT IS ONLY THEN THAT  
THERE CAN BE REGENERATION  
BECAUSE THEN THE MIND IS  
CAPABLE OF PERCEIVING WHAT IS  
TRUE AND IT IS TRUTH THAT  
LIBERATES YOU NOT YOUR EFFORT  
TO BE FREE.**

**THE ART AND SCIENCE OF  
HEALING  
WHEN SOMEONE CHANGES IT  
HAPPENS “LIKE THAT”-IT IS IN  
THE MOMENT. THERE MAY  
HAVE BEEN MUCH ANALYSIS,  
SUFFERING LEADING TO THE  
MOMENT. WHEN ONE IS AWARE  
AND HEARS “TRUTH” AN INNER  
RECONFIGURATION OCCURS.**

# **THE ART AND SCIENCE OF HEALING**

- IT IS UNDERSTANDING THAT MATTERS**
- UNDERSTANDING IS IMMEDIATE, DIRECT; IT IS SOMETHING YOU EXPERIENCE INTENSELY**
- TO MERELY MEMORIZE TO REMEMBER WHAT YOU HAVE HEARD INVOLVES MEMORY**
- UNDERSTANDING IS CONSTANT DISCOVERY**
- IF YOU MERELY REMEMBER YOU WILL ALWAYS BE COMPARING WHICH BREEDS ENVY-THIS IS WHAT OUR ACQUISITIVE SOCIETY IS BASED UPON**

# **THE ART AND SCIENCE OF HEALING**

- **TAO OF WU WEI**
  - **THE NON-ACTION OR NON-DOING WHICH IS NOT INTENT ON RESULTS AND IS NOT CONCERNED WITH CONSCIOUSLY MADE PLANS OR DELIBERATELY ORGANIZED ACTS**
  - **IF ONE IS IN HARMONY THE ANSWER WILL MAKE ITSELF KNOWN INTUITIVELY WHEN THE TIME COMES TO ACT**
  - **THEN ONE WILL NOT ACT ACCORDING TO SELF-CONSCIOUS DELIBERATION BUT BASED UPON A CONNECTION WITH THE DIVINE SOURCE OF ALL GOOD**

# **THE ART AND SCIENCE OF HEALING**

- **TAO OF WU WEI (CONTINUED)**
  - **EFFECT OF SOCIETY IS TO COMPLICATE AND CONFUSE OUR EXISTENCE MAKING US FORGET WHO WE REALLY ARE BY CAUSING US TO BE OBSESSED WITH WHO WE ARE NOT**
  - **TRUE CHARACTER OF WU WEI IS NOT MERE INACTIVITY BUT PERFECT ACTION- IT IS ACTION WITHOUT ACTIVITY.**

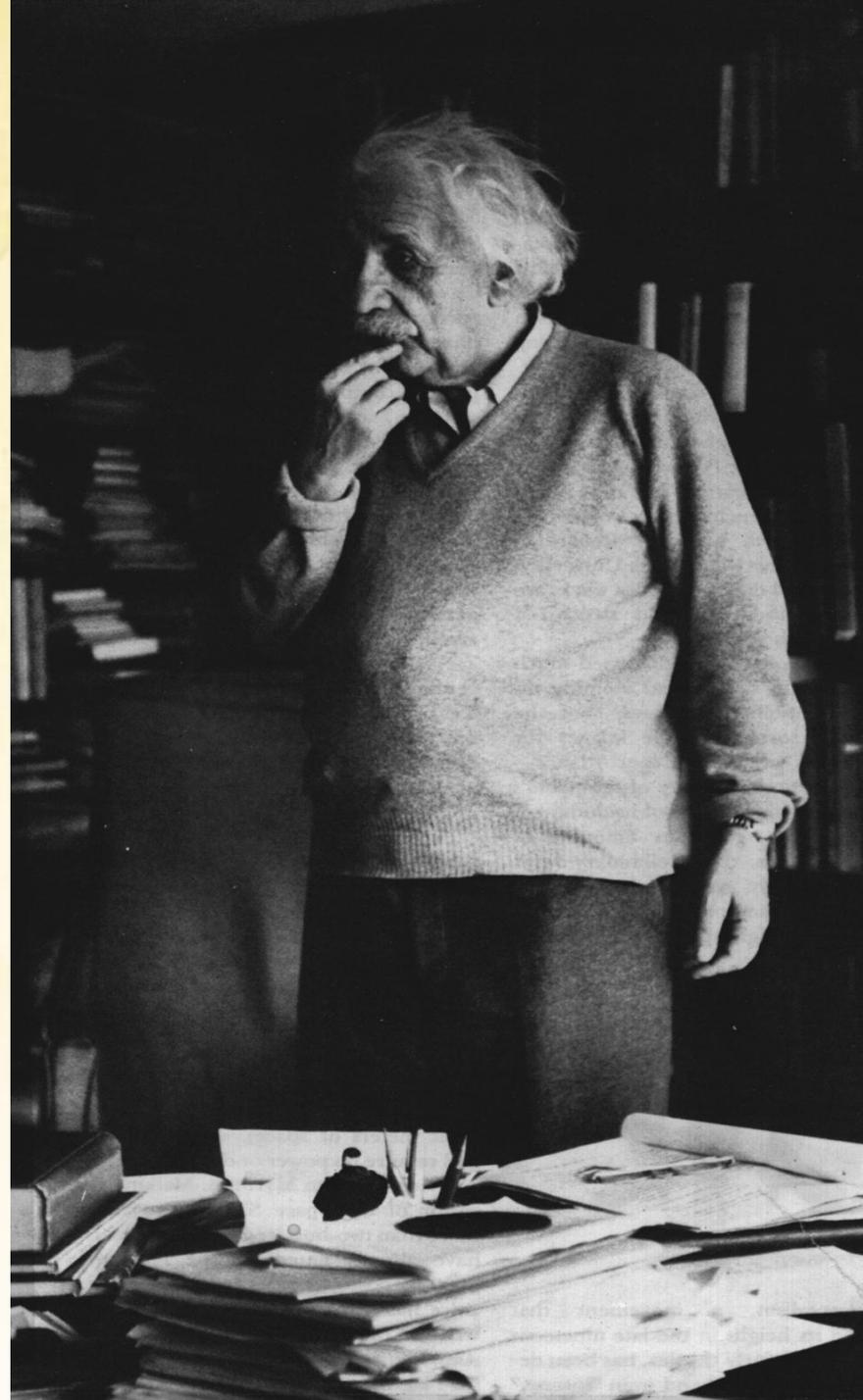
# **THE ART AND SCIENCE OF HEALING**

- **TAO OF WU WEI (CONTINUED)**
  - **IT IS ACTION IN HARMONY WITH HEAVEN AND EARTH**
    - **IT IS EFFORTLESS, SPONTANEOUS AND IN PERFECT ACCORD WITH OUR NATURE AND OUR PLACE IN THE SCHEME OF THINGS**
    - **NOT CONDITIONED BY IDEAS AND THEORIES AND USES NO FORCE OR VIOLENCE**
    - **NOT RELATED TO OUR NEEDS AND DESIRES**

**"The intuitive mind is  
a sacred gift and  
the rational mind is  
a faithful servant.**

**We have created a  
society that honors  
the servant and has  
forgotten the gift."**

**--Albert Einstein**



# **THE ART AND SCIENCE OF HEALING**

***CAN YOU REMEMBER AN EXPERIENCE WHEN SOMEONE (A CLIENT, FRIEND OR CHILD) CAME TO YOU WITH AN UNSOLVABLE PROBLEM AND IN YOUR PRESENCE CAME UP WITH THE SOLUTION WITHOUT YOU SAYING A WORD?***

# **THE ART AND SCIENCE OF HEALING**

- **ENTRAINMENT**
- **COHERENCE**
- **SEEING THE LOVE AND BEAUTY INSIDE ONE WHO CANNOT SEE IT INSIDE OF HIM/HER SELF**

# **THE ART AND SCIENCE OF HEALING**

## **COHERENCE**

- **Any object (piece of wood, bone, electron, molecule, etc.) has a certain natural or resonant frequency**
- **When two objects have similar natural frequencies, they can interact without touching; their vibrations can become coupled or entrained**
- **For electromagnetic interactions between molecules the word “resonance” is used more often than entrainment**

# THE ART AND SCIENCE OF HEALING

- If a piano and a guitar were both tuned and a G cord was played on the piano, the G string on the guitar would also vibrate
- Entrainment allows two similarly tuned systems to align their movement and energy so they match in rhythm and phase
- When two systems are oscillating at different frequencies there is an impelling force called *resonance* that causes the two to transfer energy from one to the other

# THE ART AND SCIENCE OF HEALING

- When two similarly tuned systems vibrate at different frequencies there is another aspect of this energy called *entrainment* which causes them to line up and to vibrate at the same frequency
- ***LOVE IS THE UNIVERSAL VIBRATION THAT ALLOWS PEOPLE TO TRANSFER HEALING ENERGY FROM ONE TO ANOTHER***

# **THE ART AND SCIENCE OF HEALING**

- ***ONE DOES NOT HEAL ANOTHER***
- ***THAT IS ARROGANCE!***
- ***ALL ONE DOES IS PROVIDE THE RESONANT ENERGY TO ALLOW OTHERS TO HEAL THEMSELVES***

# **THE ART AND SCIENCE OF HEALING**

- **Living tissue has a crystalline nature**
- **Living crystals are composed of long, thin, pliable molecules that are soft and flexible (i.e. liquid crystals)**
- **Crystalline arrangements are the rule and not the exception in living systems**
- **Molecules interact with each other via electromagnetic fields (often referred to as “light” and their units as “photons”)**

# **THE ART AND SCIENCE OF HEALING**

- **Crystalline molecular arrays should vibrate strongly and coherently**
- **The vibrations are collective or cooperative phenomena in which all of the weakly vibrating parts in the presence of an electromagnetic field become coupled**
- **The result is a strong, orderly and stable vibration far more than the sum of the individual parts**

# THE ART AND SCIENCE OF HEALING

- ***Crystalline molecular arrays found throughout the body are exceedingly sensitive to energy fields in the environment***
- ***Strong oscillations can travel about within the crystalline network of the body and can radiate into the environment***
- ***Crystalline components of the living matrix act as coherent molecular “antennas” radiating and receiving signals***

# **THE ART AND SCIENCE OF HEALING**

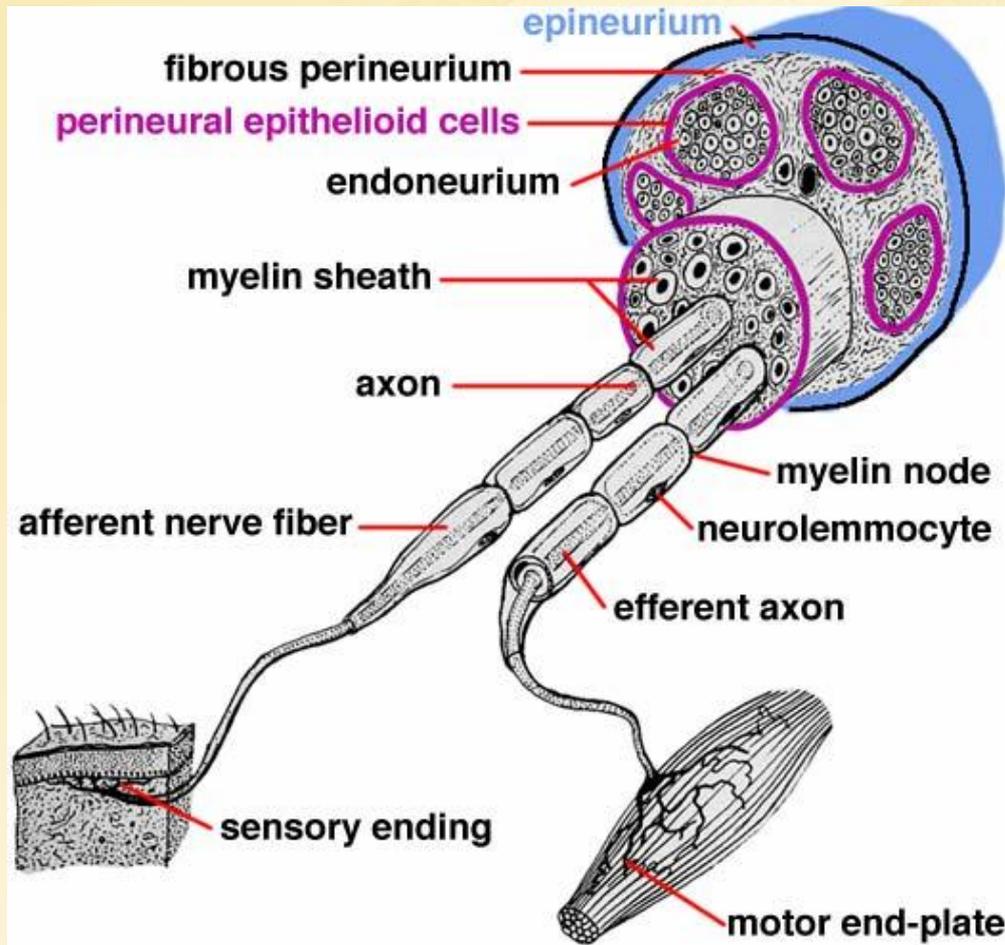
- **Water in the spaces between parts of the highly ordered system is highly organized**
- **Vibrations of water molecules can couple to the coherent energy patterns within the protein (crystalline) array**
- **The resulting coherent water system has a laser-like property and is likely to retain and release electromagnetic information (i.e. have a form of memory)**

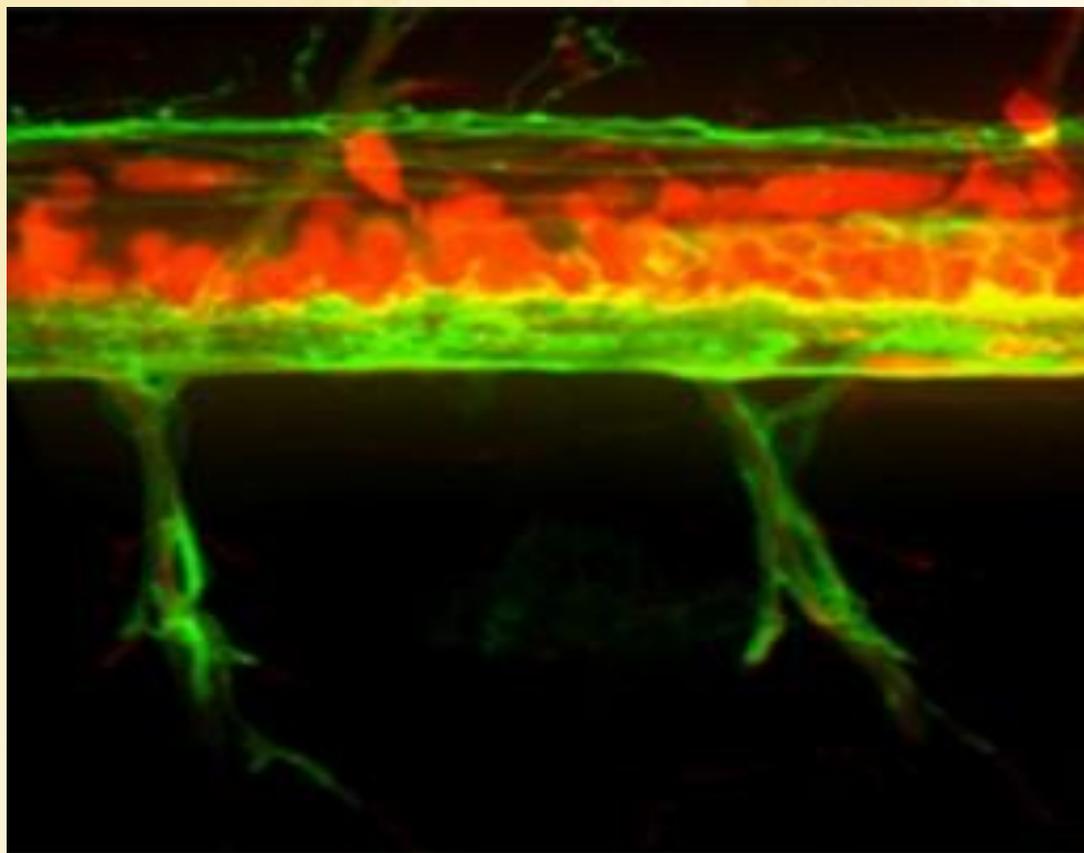
# **THE ART AND SCIENCE OF HEALING**

- **Medical research has stated energy field therapies are effective because they project “information” into tissue**
- **Applications of healing energy whether from a medical device or human hands can open networks to the flow of information when physical and/or emotional or trauma impair continuity**

# **THE ART AND SCIENCE OF HEALING**

- **There is an ancient information system residing in the perineural connective tissue cells (includes glial cells)**
- **Perineural cells encase every nerve fiber throughout the body**
- **The perineural system is a direct current (DC) communication system reaching every innervated tissue**
- **This system establishes a “current of injury” that controls injury repair**





# **THE ART AND SCIENCE OF HEALING**

- **The “current of injury” is generated at wound sites and continues until repair is complete**
- **The current attracts mobile skin cells, white blood cells, fibroblasts, etc. that close and heal wounds**
- **When healed the energy current shifts and sends feedback to the system**
- **The “current of injury” is not an ionic current but a semiconductor current sensitive to magnetic fields**

# **THE ART AND SCIENCE OF HEALING**

- **Semiconduction takes place in the perineural tissue**
- **The importance of semiconduction is that it can be precisely controlled**
- **Virtually all molecules are semiconductors**

# **THE ART AND SCIENCE OF HEALING**

- **Entrainment occurs when two rhythms that have nearly the same frequency become coupled to each other so they both have the same rhythm**
- **Brain waves are not constant in frequency but vary from moment to moment**
- **The brains pacemaker is located in the thalamus (thalamic rhythm generator)**

# **THE ART AND SCIENCE OF HEALING**

- **Calcium ions slowly leak into thalamocortical neurons which oscillate for 1.5-28seconds**
- **When excess calcium builds up the oscillation ceases**
- **This silent period lasting 5-25 seconds allows brain waves to “free run” (are not paced by thalamus)**
- **During this time brain waves are susceptible to entrainment by external electric and magnetic rhythms-either natural or man-made**

# **THE ART AND SCIENCE OF HEALING**

- **The brain waves spread out throughout the entire nervous system via the perineural system**
- **During meditation, “free run” can be dominated by geophysical rhythms**

# **THE ART AND SCIENCE OF HEALING**

***DOES TOUCH MAKE A  
DIFFERENCE?***

# **THE ART AND SCIENCE OF HEALING**

- **We have an innate ability to decode emotions by touch alone**
- **Matthew Hertenstein, DePauw University, 2009**
  - **Have the ability to send and receive emotional signals through touch**
  - **Participants communicated eight distinct emotions-anger fear, disgust, love, gratitude, sympathy, happiness and sadness at 78% accuracy (chance would have been around 25%)**

# THE ART AND SCIENCE OF HEALING

- Michael Spezio, Scripts College, 2012
  - Using fMRI to measure brain activation in heterosexual males being touched
  - Shown a video of a man or a woman purportedly touching them on the leg
  - Primary somatosensory cortex responded more to woman's touch than to a man's
  - However, the videos were fake as it was always a woman touching them on the leg
  - Suggests the emotional and social components of touch are all but inseparable from physical sensations

# THE ART AND SCIENCE OF HEALING

- We feel more connected to someone if they touch us although the *context is important*
- Touch strengthens relationships and is a marker of closeness
- *When you stimulate the pressure receptors in the skin you lower stress hormones and at the same time stimulate the release of oxytocin which enhances trust and attachment*

# THE ART AND SCIENCE OF HEALING

- The person touching gets the same benefits
- Peter Andersen, San Diego State University and author of *Nonverbal Communication: Forms and Functions*
  - The most important things we reveal through touch are probably our degree of dominance or our degree of intimacy
  - A limp handshake signifies uncertainty, low enthusiasm and introversion
  - A vice-like grip is a sign of domination
  - Doctors, teachers, etc. who are more touch-oriented get higher ratings

# **THE ART AND SCIENCE OF HEALING**

**HOW DO YOU  
CHANGE A HABIT?**

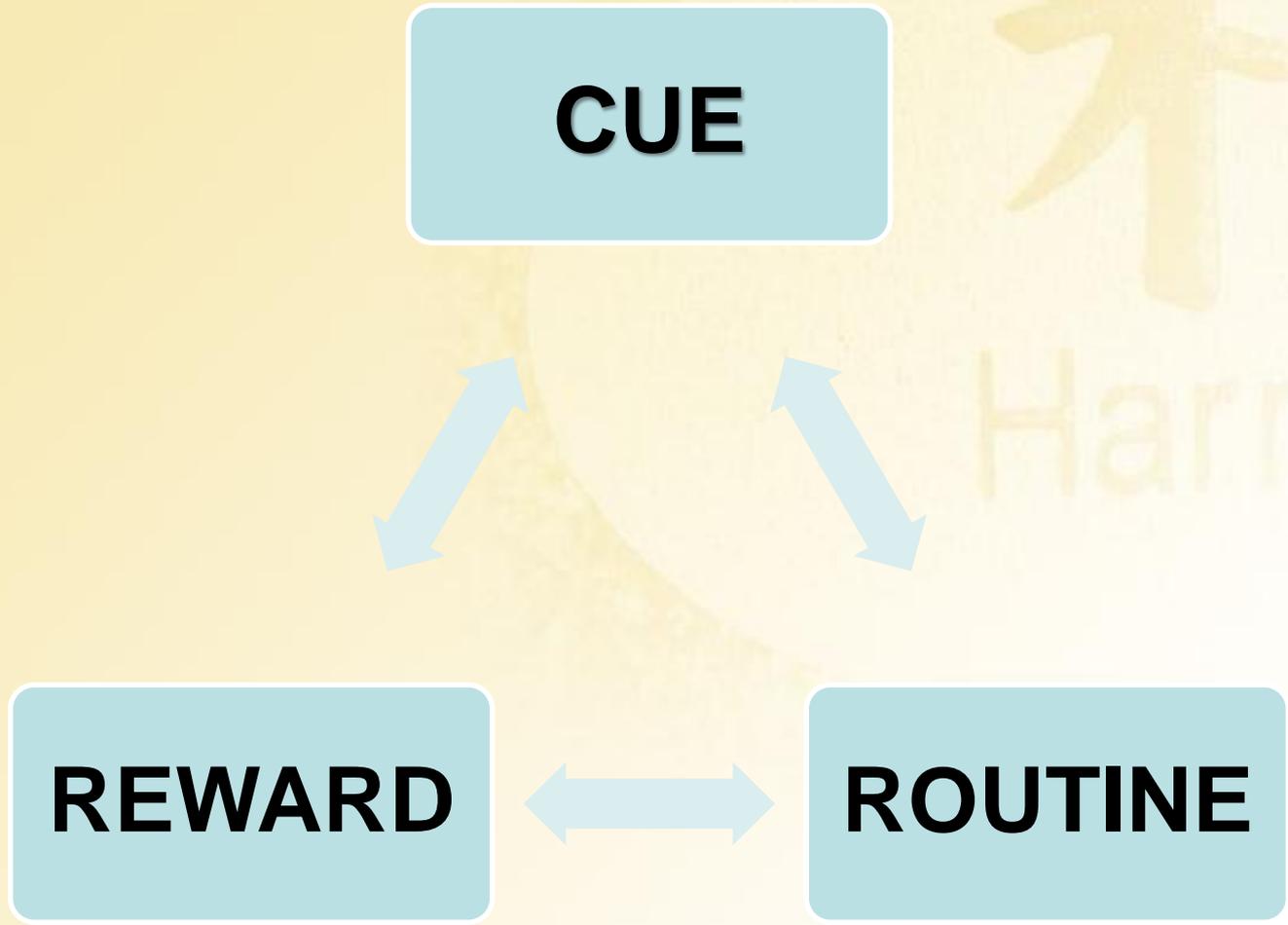
# **THE ART AND SCIENCE OF HEALING**

- **When a habit begins the whole brain is activated as it actively processes all of the stimuli**
- **After this phase the higher brain begins to reduce level of activation**
- **Then even the memory centers reduce activity**
- **BASAL GANGLIA has now taken control of recalling the patterns and acting on them**

# **THE ART AND SCIENCE OF HEALING**

- **BASAL GANGLIA** controls the sequencing of behaviors involved in the habit
  - **“CHUNKING”**
    - A sequence of actions that make up a habit
    - This is a way of reducing effort
- **CUE (AUTOMATIC MODES, WHICH HABIT TO USE)**
- **ROUTINE (PHYSICAL, EMOTIONAL, MENTAL)**
- **REWARD (IS HABIT WORTH REMEMBERING)**

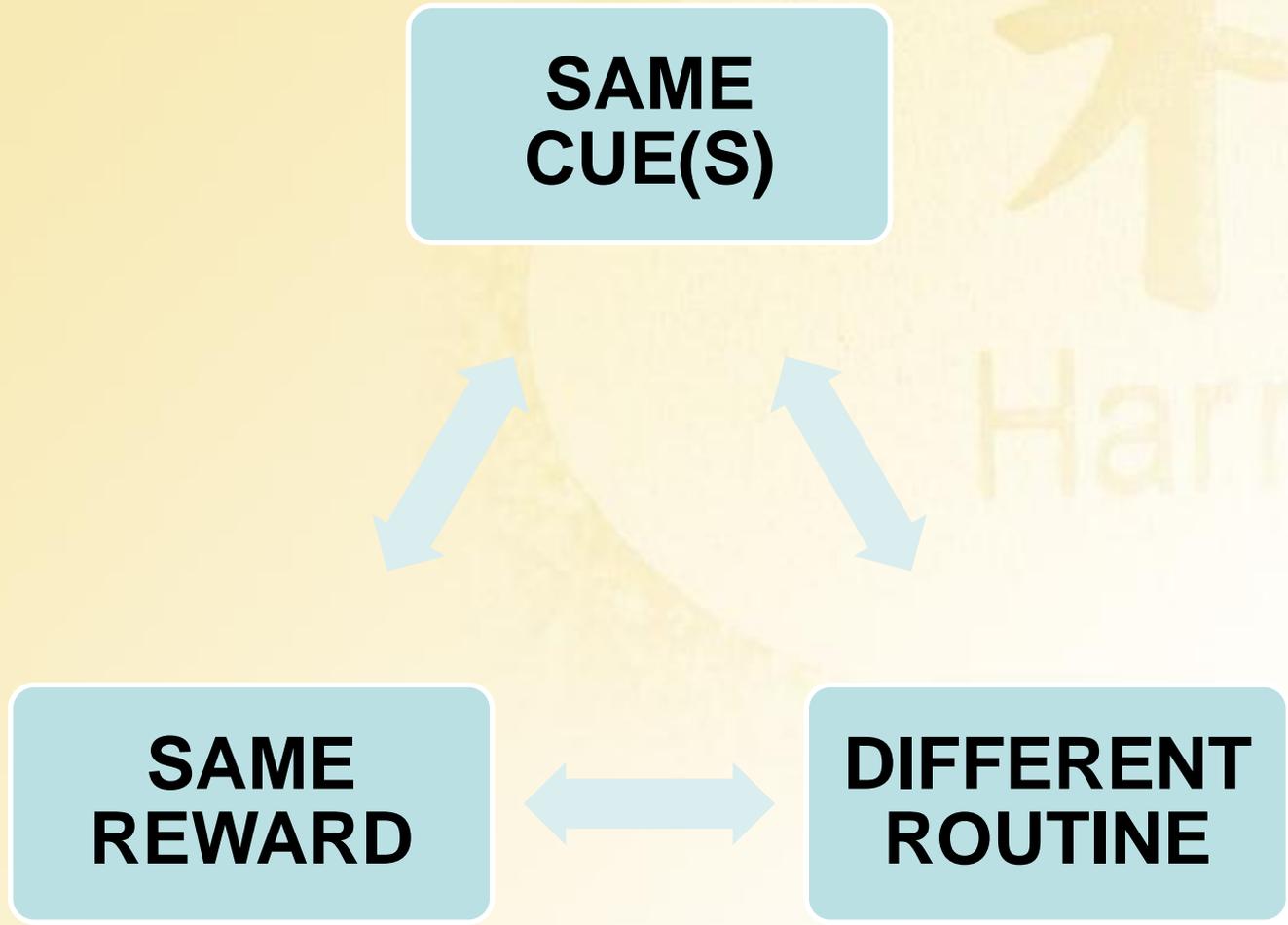
# HABIT LOOP



# **THE ART AND SCIENCE OF HEALING**

- **CUE AND REWARD BECOME INTERTWINED CREATING A CRAVING (CONDITIONING)**
- **In a habit the brain reduces emphasis on decision making**
- **Pattern unfolds automatically unless you find a new routine**
- **After craving develops, cannot extinguish a bad habit, you can only change it**

# HABIT LOOP



# **THE ART AND SCIENCE OF HEALING**

- **ALMOST ANY HABIT CAN CHANGE IF YOU KEEP THE SAME CUE(S) AND SAME REWARD**
- **ALCOHOLICS ANONYMOUS changes the habit loop**
  - **Seven of the twelve steps mention God or spirituality which seems odd since Bill W. was a sometimes professed agnostic who was , at times, openly hostile toward religion**

# THE ART AND SCIENCE OF HEALING

- **ALCOHOLICS ANONYMOUS** succeeds because it helps use the same cues and get the same rewards but shifts the routine
- *To change a habit must address the same cues and rewards as before and feed the craving by inserting a new routine*
- **WHAT DO WE CRAVE?**
  - *Is it connection, reduce anxiety, forget worries?*
  - *Meetings and companionship-another bar to escape to, catharsis, distraction*

# HABIT

- **What is the pleasure we seek in the first place?**
  - **Is it...**
    - **COMPLETION**
    - **TO FORGET**
    - **TO CONNECT**
    - **TO REWARD MYSELF**
    - **TO GIVE ME COURAGE**
    - **TO FEEL LIKE YOU BELONG AS ONE OF THE GROUP**

# HABIT

- **What is the thirst behind the thirst?**
  - **“I was thirsty because I was feeling incomplete and alcohol helped me feel more connected, more alive.”**
  - **Bill Wilson, “Before A.A. we were trying to drink God out of a bottle.”**
  - **Gerald May- a deep yearning for fulfillment or completion; a longing to love and be loved and a desire for the source of this love-God**

# HABIT

- **What is the thirst behind the thirst?**
  - The great analyst Carl J. Jung put it thus, ***“His craving for alcohol was the equivalent, on a low level, of the spiritual thirst of our being for wholeness, expressed in medieval language: the union with God.”***
  - An intense, urgent, or abnormal desire or longing. At the time it seems more painful than any other longing. It subsumes us and we are a slave to it...and it seems it will never end. Although not understood in that moment, it is really a powerful thirst to go “home.”

# HABIT

- **Saul Bellow's *Henderson the Rain Maker*:**
  - ***“Now I have already mentioned that there was a disturbance in my heart, a voice that spoke there and said, I want, I want, I want! It happened every afternoon and when I tried to suppress it it got even stronger. It only said one thing, I want, I want, I want. And I would ask, ‘What do you want? But this is all it would ever tell me....Through fights and drunkenness and labor it went right on, in the country, in the city. No purchase, however expensive would lessen it. Then I would say, ‘Come on, tell me. What’s the complaint, is it Lily herself? Do you want nasty whores? It has to be some lust?’ But this was no better a guess than the others. The demand came louder, I want, I want, I want, I want, I want, I want! And I would cry, begging at last, ‘Oh tell me then. Tell me what you want!’”***

# HABIT

- Thomas Wolfe's character in *Look Homeward, Angel*
  - *“What he had drunk beat pleasantly through his veins in warm pulses, bathing the tips of ragged nerves, giving to him a feeling of power and tranquility (sic) he had never known. Presently, he went to the pantry where the liquor was stored. He took a water tumbler and filled it experimentally with equal portions of whiskey, gin, and rum. Then, seating himself at the Kitchen table, he began to drink the mixture slowly.*

*The terrible draught smote him with the speed and power of a man's fist. He was made instantly drunken, and he knew instantly why men drank. It was, he knew, one of the great moments in his life—he lay, greedily watching the mastery of the grape over his virgin flesh, like a girl for the first time in the embrace of her lover. And suddenly, he knew how completely he was his father's son—how completely, and with what added power and exquisite refinement of sensation, was he Gantian. He exulted in the great length of his limbs and his body, through which the mighty liquor could better work its wizardry. In all the earth there was no other like him, no other fitted to be so sublimely and magnificently drunken. It was greater than all the music he had ever heard; it was as great as the highest poetry. Why had he never been told? Why had no one ever written adequately about it? Why, when it was possible to buy a god in a bottle, and drink him off, and become a god oneself, were men not forever drunken?”*

# HABIT

- **Shel Silverstein's character Gimmesome Roy**
  - *There is a land beyond the sun that's known as Zaboli.*  
*A wretched land of stone and sand where snakes and buzzards scream,*  
*And in this devil's garden blooms the mystic Tzu–Tzu tree.*  
*And every ten years it blooms one flower as white as the Key West sky,*  
*And he who eats of the Tzu–Tzu flower will know the perfect high.*  
*For the rush comes on like a tidal wave and it hits like the blazing sun.*  
*And the high, it lasts a lifetime and the down don't ever come.*

# HABIT

- **Kris Kristofferson understood the hunger for connection and our restless pursuit of that place called home. *The Pilgrim***
  - ***And he keeps right on a'changin' for the better or the worse, Searchin' for a shrine he's never found  
Never knowin' if believin' is a blessin' or a curse,  
Or if the goin' up was worth the comin' down  
Takin' ev'ry wrong direction on his lonely way back home.  
There's a lotta wrong directions on that lonely way back home.***

# HABIT

- Leonard Cohen song *Anthem*
  - *Ring the bells that still can ring*  
*Forget your perfect offering*  
*There is a crack, a crack in*  
*everything*  
*That's how the light gets in.*  
*That's how the light gets in.*  
*That's how the light gets in.*

# **THE ART AND SCIENCE OF HEALING**

- ***REPLACEMENT ROUTINES ONLY BECOME DURABLE NEW BEHAVIORS WHEN SPIRITUALITY IS ADDED (this is what gets you through the major crises in your life)***
- ***PATTERN:***
  - ***Could only stay sober by habit replacement until a major crisis hit***
  - ***Add spiritual element and now can get through these tough times***

# **THE ART AND SCIENCE OF HEALING**

- **PATTERN:**

- **Maybe it was not God but “the belief” itself**
- **“The belief” reworked the habit loop into a permanent behavior**
  - **Believing I can cope with stress**
- **A community creates belief**
- **Although one must believe change is possible (helpless)**

# **THE ART AND SCIENCE OF HEALING**

***THE POWER OF A GROUP TO TEACH INDIVIDUALS HOW TO BELIEVE HAPPENS WHEN PEOPLE COME TOGETHER TO HELP ONE ANOTHER CHANGE. BELIEF IS EASIER WHEN IT OCCURS IN COMMUNITY.***

# **THE ART AND SCIENCE OF HEALING**

***WHAT IS THE  
ESSENCE OF A TRUE  
HEALER?***

# **THE ART AND SCIENCE OF HEALING**

**“THE DEEPEST PRINCIPLE IN  
HUMAN NATURE IS THE CRAVING  
TO BE APPRECIATED” WILLIAM  
JAMES**

# **THE ART AND SCIENCE OF HEALING**

- **A LIFE OF NO SIGNIFICANCE (HUMILITY)**
  - BEING NOTHING
  - KNOWING NOTHING
- **A STATE WHERE EVERYTHING IS NEW AND TIMELESS**
- **AS SOON AS GIVE SIGNIFICANCE TO YOUR LIFE**
  - “I HAVE TO BECOME SOMETHING”
  - “I AM HERE FOR A REASON”
    - WHEN YOU SEEK FULFILLMENT YOU MISS LIFE

# **THE ART AND SCIENCE OF HEALING**

- **AS SOON AS YOU IDENTIFY YOURSELF WITHIN THE COLLECTIVE (CULTURE) THERE IS DIVISION**
  - **“I AM A CHRISTIAN”**
  - **“I AM A MEMBER OF NARCOTICS ANONYMOUS”**
- **WHAT DOES THE MIND DO?**
- **WE ARE ALL HUMAN BEINGS**
- **THE SPIRITUAL HEALER IS ONE WHO DOES NOT BELONG TO ANY RELIGION, TO ANY NATION, TO ANY RACE AND IS INWARDLY COMPLETELY ALONE, IN A STATE OF NOT-KNOWING AND FOR HIM THE BLESSING OF THE SACRED COMES INTO BEING**

# **THE ART AND SCIENCE OF HEALING**

- **POVERTY IS TO BECOME FREE OF SOCIETY.**
- **ONE MUST BECOME POOR INWARDLY**
- **FOR THEN THERE IS NO SEEKING, NO ASKING, NO DESIRE, NO NOTHING!**
- **IT IS ONLY INWARD POVERTY THAT CAN SEE THE TRUTH OF LIFE IN WHICH THERE IS NO CONFLICT AT ALL**
- **IN THIS STATE WE CAN SEE AND HEAR OTHERS AS THEY REALLY ARE**

# **THE ART AND SCIENCE OF HEALING**

- **Listening is important only when one does not project their own desires into the other**
- **We listen from preconceptions (images) or from a particular point of view**
- **To really listen one needs an inward quietness (awareness), a freedom from the need to acquire**
- **This inner quietness allows a connection or communion beyond the noise of words**

# **THE ART AND SCIENCE OF HEALING**

- **It is only when one listens without ideas, without thoughts, that one can determine if what is being said is true or false**
- **FOR MOST OF US SILENCE IS WHAT OCCURS WHEN THERE IS NO NOISE**
- **FOR OTHERS THE SILENCE ALWAYS EXISTS AND AT TIMES NOISE OCCURS**
- **I-THOU**

# **THE ART AND SCIENCE OF HEALING**

- **PERFECT LISTENING**

- **PERFECT LISTENING IS LISTENING NOT SO MUCH TO OTHERS AS TO ONESELF**
- **PERFECT SIGHT IS SEEING NOT OTHERS SO MUCH AS ONESELF**
- **FOR THEY FAIL TO UNDERSTAND THE OTHER WHO HAVE NOT HEARD THEMSELVES; AND THEY ARE BLIND TO THE REALITY OF OTHERS WHO HAVE NOT PROBED THEMSELVES. THE PERFECT LISTENER HEARS YOU EVEN WHEN YOU SAY NOTHING**

# **THE ART AND SCIENCE OF HEALING**

**“WHEN OUR LIFE CEASES TO BE INWARD AND PRIVATE, CONVERSATION DEGENERATES INTO MERE GOSSIP....IN PROPORTION AS OUR INWARD LIFE FAILS, WE GO MORE CONSTANTLY AND DESPERATELY TO THE POST OFFICE. YOU MAY DEPEND ON IT, THAT THE POOR FELLOW WHO WALKS AWAY WITH THE GREATEST NUMBER OF LETTERS PROUD OF HIS EXTENSIVE CORRESPONDENCE HAS NOT HEARD FROM HIMSELF THIS LONG WHILE.”**

**THOREAU, *WALDEN AND OTHER WRITINGS*. BANTAM BOOKS, LONDON, 1950, PPG723-4.**

# **THE ART AND SCIENCE OF HEALING**

***RELIVE A TIME WHEN YOU  
TOTALLY RESONATED  
WITH A CLIENT OR A  
CHILD***

***WHAT WAS THE  
EXPERIENCE LIKE?***

# **THE ART AND SCIENCE OF HEALING**

- **ONE UNCONSCIOUS MIND COMMUNICATES WITH ANOTHER UNCONSCIOUS MIND**
- **RIGHT HEMISPHERE (RH) RESPONDS QUICKLY TO ALL STIMULI**
- **IMPLICIT LEVEL OF THE THERAPEUTIC ALLIANCE (BENEATH THE EXPLICIT COGNITIONS AND LANGUAGE) ARE THE CORE OF THE CHANGE MECHANISM AT THE UNCONSCIOUS LEVEL**

# **THE ART AND SCIENCE OF HEALING**

- **INVOLVES CO-CREATION OF AN INTERSUBJECTIVE CONTEXT THAT FACILITATES THE PROCESS OF CHANGE (ATTACHMENT COMMUNICATION)**
- **ATTACHMENT COMMUNICATION REPRESENTS RH TO RH TRANSACTION THAT FACILITATE THE EXPERIENCE DEPENDENT MATURATION OF RH**

# **THE ART AND SCIENCE OF HEALING**

- **THERAPEUTIC ALLIANCE**
  - **THERAPIST'S FACILITATING BEHAVIORS COMBINE WITH THE PATIENTS CAPACITY FOR ATTACHMENT TO PERMIT DEVELOPMENT OF ALLIANCE (PRIMARY COMPONENT OF EMOTIONAL BOND)**
  - **THERAPIST MUST BE EMOTIONALLY AVAILABLE**

# **THE ART AND SCIENCE OF HEALING**

- **CARL ROGERS (1986)**

**“AS A THERAPIST, I FIND THAT WHEN I AM CLOSEST TO MY INNER, INSTINCTIVE SELF, WHEN I AM SOMEHOW IN TOUCH WITH THE UNKNOWN IN ME, WHEN PERHAPS I AM IN A SLIGHTLY ALTERED STATE OF CONSCIOUSNESS IN THE RELATIONSHIP, THEN WHATEVER I DO SEEMS FULL OF HEALING.”**

# **THE ART AND SCIENCE OF HEALING**

***HAVE YOU HAD THE  
EXPERIENCE OF BEING  
WITH SOMEONE WHO  
WRAPPED YOU IN THERE  
LOVE AND IT FELT LIKE  
ONLY THE TWO OF YOU  
EXISTED?***

# **THE ART AND SCIENCE OF HEALING**

- **SPIRITUAL VISION**

- **RIGHT HEMISPHERE SEES THE BIGGER PICTURE**

- **BLENDED OR SOFTENED PERCEPTION**

- Perceives low frequency of sound
- Perceives the longer wavelengths of light

- **EGO VISION**

- **LEFT HEMISPHERE FOCUSES ON DETAIL**

- **Perceives shorter wavelengths**

- Delineate sharp boundaries

- **Perceives high frequency sound**

- Detect, discriminate and interpret tones associated with language

# **THE ART AND SCIENCE OF HEALING**

***WHEN YOU WORK WITH  
SOMEONE WHAT IS  
YOUR INTENTION?***

# **THE ART AND SCIENCE OF HEALING**

- **INTENTION CHANGES OUTCOME**
  - HEISENBERG PRINCIPLE
  - VON NEUMANN FORMULA
- **LOVE AND BEAUTY**
- **INTEGRITY**
- **TO HELP PEOPLE SEE THE TRUTH IN THEMSELVES**
- **LIGHT**

# **THE ART AND SCIENCE OF HEALING**

- **REMEMBER...**

- Your mind (thoughts) can directly influence the rate of growth of bacteria, fungi and plants
- Depending upon whether the clinician focuses thought using calming or activating imagery, they can create a greater sense of relaxation or anxiety in the patient

**Nelson, Bradley. “The Emotion Code”.  
Wellness Unmasked Publishing, 2011, pg.  
48**

# **THE ART AND SCIENCE OF HEALING**

- **WHEN THERE IS UNCONDITIONAL LOVE AND BEAUTY WHATEVER YOU DO IS RIGHT**
- **UNCONDITIONAL LOVE WILL SOLVE ALL PROBLEMS**
- **UNCONDITIONAL LOVE IS PASSION WITHOUT MOTIVE**
- **A MIND THAT IS SEEKING IS NOT A PASSIONATE MIND AND TO COME UPON LOVE WITHOUT SEEKING IS THE ONLY WAY TO FIND IT**

# **THE ART AND SCIENCE OF HEALING**

- **LIGHT**

- **UNIVERSAL METAPHOR FOR GOD**
- **LIGHT IS CONSCIOUSNESS, INTELLIGENCE AND UNDERSTANDING**
- **LIGHT CREATES**
  - **PUMPS POWER INTO THE SPACIO-TEMPORAL WORLD**
    - **PHOTOSYNTHESIS**
- **LIGHT IS DIFFERENT**

# **THE ART AND SCIENCE OF HEALING**

- **LIGHT**

- **SITS ON THE CUSP OF THE LINEAR AND NONLINEAR REALMS**

- **ITS SPEED IS 186,000 MILES PER SECOND IS AN UNWAVERING CONSTANT**

- **EVERYTHING IN THE UNIVERSE ADJUSTS TO IT**

- **AS SPEED INCREASES TIME SLOWS DOWN**

- **AT SPEED OF LIGHT TIME STOPS**

# **THE ART AND SCIENCE OF HEALING**

- **LIGHT**

- **PHOTONS ARE QUANTA OF LIGHT**

- **HAVE NEITHER RESTING MASS NOR AN ELECTRICAL CHARGE**

- **PARTICLES WITH MASS ARE DERIVED FROM LIGHT ENERGY**

- **LIGHT PRODUCES THE PHYSICAL UNIVERSE AND IS RESPONSIBLE FOR ITS PERMUTATIONS**

# **THE ART AND SCIENCE OF HEALING**

- **LIGHT**

- **FROM QUANTUM MECHANICS**

- **ESSENCE OF EVERY INTERACTION IN THE UNIVERSE IS THE EXCHANGE OF QUANTA OF ENERGY (QUANTA IS THE SMALLEST PACKET OF ENERGY THAT CAN BE EXCHANGED)**
      - **MEASURED BY PLANCK'S CONSTANT**
    - **IT IS QUANTA OF PHOTONS THAT CHANGE MOLECULES IN THE ACT OF PHOTOSYNTHESIS AND EXCITE ATOMS IN THE RETINA TO ENABLE US TO SEE**

# THE ART AND SCIENCE OF HEALING

- **LIGHT**

- THE LIGHT OF GOD IS WITHIN YOU AND IT IS CALLED THE SELF, ATMAN, BUDDHA NATURE, SOUL, TAO OR HOLY SPIRIT
- *IT IS THE LIGHT IN YOU THAT HEALS*
- WHEN IT IS ACCESSED WITHOUT THE FILTERING DISTORTION OF THE EGO IT CAN BE EXPERIENCED AS NIRVANA, SAT-CHIT-ANANDA, OR ENLIGHTENMENT

# **THE ART AND SCIENCE OF HEALING**

- **LIGHT**

- Light exerts powerful effects on the brain and on our well-being.
- Light is essential for a wide range of "non-visual" functions including synchronization of our biological clock to the 24h day-night cycle. Light also conveys a powerful stimulating signal for human alertness and cognition and has been routinely employed to improve performance

# **THE ART AND SCIENCE OF HEALING**

- **LIGHT**

- **Researchers have discovered a new type of light sensitive cell (photoreceptor) in the eye called melanopsin.**
- **Cyclotron Research Centre of the University of Liège (Belgium) and of the Department of Chronobiology of the INSERM Stem Cell and Brain Research Institute (Bron, France) have provided evidence demonstrating the involvement of melanopsin in the impact of light on cognitive brain function.**

# **THE ART AND SCIENCE OF HEALING**

- **CASE WESTERN RESERVE AND INSTITUTE OF NOETIC STUDIES**
  - ***WHEN YOU SEND AN INTENTION EVERY PHYSIOLOGICAL SYSTEM IN YOUR BODY IS MIRRORED IN THE BODY OF THE RECEIVER***
    - **ELECTRICAL SIGNALS IN THE BRAINS OF PEOPLE GET SYNCHRONIZED**
  - **THE FREQUENCIES, AMPLITUDES AND PHASES OF THE BRAIN WAVES OPERATE IN TANDEM**

# THE ART AND SCIENCE OF HEALING

- **CASE WESTERN RESERVE AND INSTITUTE OF NOETIC STUDIES**
  - **EEG WAVES MIRROR THOSE OF SENDER**
  - ***EEG WAVES OF THE RECIPIENT OF HEALING SYNCHRONIZE WITH THOSE OF THE HEALER DURING MOMENTS WHEN HEALING ENERGY IS SENT***

# THE ART AND SCIENCE OF HEALING

- **JACOBO GRINBERG-ZYLBERBAUM OF UNIVERSITY OF MEXICO**
  - PARTICIPANT WITH THE MOST COHESIVE QUANTUM WAVE PATTERNS GENERALLY SET THE TEMPO AND TENDED TO INFLUENCE THE OTHER
  - *THE MOST ORDERED BRAIN PATTERN GENERALLY PREVAILED*

# **THE ART AND SCIENCE OF HEALING**

- **SYNCHRONY**

- **MID 20<sup>TH</sup> CENTURY 200 MALE MEDICAL STUDENTS WERE INTERVIEWED TO DETERMINE THE EXTENT OR LACK OF PATERNAL NURTURING EXPERIENCED IN INFANCY AND CHILDHOOD**
- **FORTY YEARS LATER**
  - **25% OF THOSE WITH SUPPORTIVE AND NURTURING PARENTS HAD ILLNESSES RELATED TO AGE**
  - **89% OF THOSE WITH UNSUPPORTIVE PARENTS HAD ILLNESSES RELATED TO AGE**

# **THE ART AND SCIENCE OF HEALING**

- **SYNCHRONY**

- **SCHWARTZ AND RUSSEK-UNIVERSITY OF ARIZONA ALSO STUDIED THESE MEN. DURING AN INTERVIEW**

- **WITHIN A SHORT TIME THE AVERAGED EEG PATTERNS OF THOSE SUBJECTS HAVING POSITIVE CHILDHOODS SYNCHRONIZED OR ENTRAINED WITH THE AVERAGED EEG PATTERNS OF THE INTERVIEWER**
    - **THE EEG PATTERNS OF THE SUBJECTS WITH NEGATIVE CHILDHOODS SHOWED A SLOWER FORMING AND WEAKER CORRESPONDENCE TO THE INTERVIEWER**

# THE ART AND SCIENCE OF HEALING

- Treatment professionals must deal with problems that are complex and urgent, often with limited resources
- When staff members reported lower levels of stress, patients reported more active participation in treatment
- Treatment programs can reduce staff stress by giving employees a voice in organizational policies and procedures

# THE ART AND SCIENCE OF HEALING

- Staff who rated their influence within their programs as relatively high tolerated stress with fewer symptoms of burnout

Landrum, B.; Knight, D.K.; and Flynn, P.M. The impact of organizational stress and burnout on client engagement. *Journal of Substance Abuse Treatment* 42(2):222–230, 2012.

# **THE ART AND SCIENCE OF HEALING**

**WHAT ARE THE COMMON  
FACTORS INVOLVED IN THE  
THERAPEUTIC CHANGE  
PROCESS?**

# **THE ART AND SCIENCE OF HEALING**

- **OPENNESS, HONESTY AND TRUST VALUED**
- **EXPLORATION OF BEHAVIOR, EMOTION, SENSATION AND COGNITION IN AN ATTEMPT TO INCREASE AWARENESS OF PREVIOUS UNCONSCIOUS OR DISTORTED MATERIAL**
  - **Integration of affect with conscious awareness and cognition**
  - **Intellectual understanding in the absence of integration does not result in change**

# **THE ART AND SCIENCE OF HEALING**

- **SAFE EMERGENCY**
- **EVOCAION OF EMOTION COUPLED WITH CONSCIOUS AWARENESS IS MOST LIKELY TO RESULT IN SYMPTOM REDUCTION AND PERSONAL GROWTH**
- **OPTIMAL STRESS CREATES THE MOST FAVORABLE NEUROBIOLOGICAL ENVIRONMENT FOR NEURAL PLASTICITY AND INTEGRATION**
- **STATE OF MILD TO MODERATE STRESS IS IDEAL FOR FOSTERING CONSOLIDATION AND INTEGRATION**

# **THE ART AND SCIENCE OF HEALING**

- **SAFE AND SUPPORTIVE RELATIONSHIPS ARE THE OPTIMAL ENVIRONMENT FOR SOCIAL AND EMOTIONAL LEARNING**
- **EMPATHIC ATTUNEMENT = NURTURANCE = SECURE ATTACHMENT**
- **BY CREATING AN ENVIRONMENT OF NURTURANCE AND ACCEPTANCE THE THERAPIST CREATES THE OPTIMAL POSSIBILITY FOR LEARNING BOTH COGNITIVELY AND EMOTIONALLY ALLOWING THE BIOLOGICAL PLAN AND NEUROPLASTICITY TO DO ITS JOB**

# **THE ART AND SCIENCE OF HEALING**

- **HIGH AROUSAL INHIBITS CORTICAL PROCESSING AND DISRUPTS INTEGRATION (ABILITY TO TOLERATE THOUGHTS AND EMOTIONS PREVIOUSLY INHIBITED, DISSOCIATED OR DEFENDED AGAINST)**
- **IN PSYCHOTHERAPY UNDERSTANDING IS THE “BOOBY PRIZE” - A PSYCHOLOGICAL EXPLANATION FOR A PROBLEM REMAINING UNRESOLVED**

# **THE ART AND SCIENCE OF HEALING**

**“THE CURIOUS PARADOX  
IS THAT WHEN I ACCEPT  
MYSELF AS I AM, THEN I  
CAN CHANGE” ...CARL  
ROGERS**

# **THE ART AND SCIENCE OF HEALING**

***HOW DO YOU ADDRESS A  
NEW CLIENT?***

***WHAT ARE THE FIRST THINGS  
YOU SAY TO THIS PERSON?***

# **THE ART AND SCIENCE OF HEALING**

- ***THE PLACEBO EFFECT DEPENDS ENTIRELY ON THE PATIENT'S STATE OF BELIEF***
- ***THE MIND CAN CHANGE THE BIOLOGY OF THE BRAIN***
- ***CLINICIANS SHOULD ALWAYS TAKE ADVANTAGE OF THE PLACEBO EFFECT***
  - ***GREET EVERY PATIENT POSITIVELY***
  - ***BE SUPPORTIVE***
  - ***TELL PATIENT YOU EXPECT THEM TO GET BETTER (NEVER UNDERESTIMATE THE POWER OF HOPE)***

# **THE ART AND SCIENCE OF HEALING**

- IF TREATMENT PROTOCOL IS EVIDENCE-BASED OR IF CLINICIAN HAS SUCCESSFULLY USED THE PROCEDURE, ADVISE THE PATIENT OF SAME***
- IF APPROPRIATE, DISPLAY DEGREES AND CERTIFICATIONS WHILE DRESSING APPROPRIATELY***

# THE ART AND SCIENCE OF HEALING

- **PLACEBO EFFECT:**

***“I HAVE WORKED WITH MANY PEOPLE WITH YOUR PARTICULAR PROBLEM AND JUST ABOUT ALL OF THEM HAVE GOTTEN MUCH BETTER. I EXPECT YOU TO GET BETTER ALSO.”***

# THE ART AND SCIENCE OF HEALING

- A sample of alcohol-dependent patients received naltrexone, acamprosate or placebo
  - No difference in outcomes
  - Those who believed they were taking an active medication consumed fewer alcoholic drinks and reported less craving
- Double-blind placebo-controlled trials intended to control for the impact of expectancy, *here perceived medication allocation predicted outcome*

# THE ART AND SCIENCE OF HEALING

- **Placebo effect is unpredictable**
  - Give same pill or potion and get different results
- **Pain, insomnia, fatigue, nausea and disturbances of bowel, urinary or sexual function most amenable**
- **Broken bones the least**
- ***Works best in illnesses with strong psychological component***
- ***Pills work best for insomnia; injections for pain***
- **Works by proxy-child gets better if parent believes**

# THE ART AND SCIENCE OF HEALING

- Utilizes circuits governing expectation, attention and emotion
- On a psychological level it is the active ingredients of *hope, trust and imagination* which are antithetical to the scientific world
- *How does the clinician evoke these active ingredients in the client?*

# THE ART AND SCIENCE OF HEALING

- *Factors that modulate the placebo effect can be concrete features, like dose, color, and cost of the pills, but also symbolic aspects, like hand writing a prescription rather than typing it, giving a name to a malaise, recognizing the other person's pain, and making a diagnosis.*
- The credibility of the health provider can also count. A substantial proportion of the placebo effect can be the ***“treatment situation”***: the “situation” is not only a physical setting, even if just the appearance of an office is important, ***but it is also a slice of the external combined with the internal world of the two subjects in cause: the patient and the doctor in the space and time of their encounter.***

# THE ART AND SCIENCE OF HEALING

- ***“There is not a single placebo effect. Rather, there are many. One common effect involves the assumption that a particular pill is responsible for easing pain or discomforts that are actually subsiding naturally. Another placebo-effect type is represented by the relief that a baby feels, following upon a prodigious “mother kiss”; I thought that this dimension should be discussed further because it touches on the attachment relationship, which is involved in the doctor-patient relationship, as well as in the mother-child one. The attachment style and story of each subject play an important role in the personalization of the healing ceremony. Furthermore, it is this dimension that frames the perceived quality of the cure.”***

**Stefan Pallanti, M.D., Ph.D.** (Reviewing Walter A. Brown. *The Placebo Effect in Clinical Practice*. New York, Oxford University Press, 2012, ) *The American Journal of Psychiatry*, Vol. 170, No. 8

# **THE ART AND SCIENCE OF HEALING**

- ***IN SUMMARY...***

**There is no one "the placebo effect." There are different mechanisms in play across a variety of medical conditions and therapeutic interventions. For example, a placebo effect takes place because there is expectation. The patient expects a therapeutic benefit, and this kind of expectation actually has an effect on the brain and the body.**

# **THE ART AND SCIENCE OF HEALING**

- ***IN SUMMARY...***

**The connection between expectation and real improvement that may occur is due at least to two mechanisms. The first may be a reduction of anxiety. The second is between expectation and the activation of a reward mechanism by the region of the brain known as the nucleus accumbens (which also governs pleasure, reinforcement learning, laughter, addiction, aggression, fear, impulsivity and the placebo effect.)**

# **THE ART AND SCIENCE OF HEALING**

- ***IN SUMMARY...***

**When a treatment is given to a patient, be it a placebo or real, it is administered in a complex set of psychological states that vary from patient to patient and from situation to situation. For example, when a placebo is given to relieve pain, it is administered along with stimuli which tell the patient that a clinical improvement should be occurring shortly. These stimuli can include the color and shape of the pill, patient and provider characteristics and the healthcare setting.**

# THE ART AND SCIENCE OF HEALING

- ***IN SUMMARY...***

**Recent research has revealed a reduced efficacy of drugs when they are administered covertly to the patient. In fact, if the placebo/expectation component of a treatment is eliminated by means of a hidden administration (unbeknownst to the patient), the psychological component of the therapy is absent as well**

American Physiological Society (APS) (2013, September 19). Placebo effect and lessons for the physician-patient relationship. *ScienceDaily*.

# **THE ART AND SCIENCE OF HEALING**

***CLEAR YOUR MIND BY  
TAKING SEVERAL  
BREATHES...***

***LOOK AT SOMEONE IN YOUR  
GENERAL VICINITY...***

***WHAT DO YOU FEEL?***

# THE ART AND SCIENCE OF HEALING

- **THEORY OF MIND**
  - Ability to think about what another is thinking
  - Starts as visceral-emotional sense of others gained from *MIRROR NEURON SYSTEM*
  - Key component of social interaction
    - *THERAPEUTIC RELATIONSHIP*
    - *EMPATHY*

# THE ART AND SCIENCE OF HEALING

- **A new University of Virginia study strongly suggests that we are hardwired to empathize because we closely associate people who are close to us -- friends, spouses, lovers -- with our very selves.**
- **The researchers found that regions of the brain responsible for threat response -- the anterior insula (primary area), putamen and supramarginal gyrus -- became active under threat of shock to the self. In the case of threat of shock to a stranger, the brain in those regions displayed little activity. However when the threat of shock was to a friend, the brain activity of the participant became essentially identical to the activity displayed under threat to the self.**
- **L. Beckes, J. A. Coan, K. Hasselmo. Familiarity promotes the blurring of self and other in the neural representation of threat. *Social Cognitive and Affective Neuroscience*, 2012; 8 (6): 670 DOI:**

# THE ART AND SCIENCE OF HEALING

- **The amount of empathy is directly correlated to the volume of gray brain matter of the corresponding cortical representation in the insular region, and that the patients with narcissism exhibit a structural deficit in exactly this area (Stefan Roepke et al. Gray matter abnormalities in patients with narcissistic personality disorder. *Journal of Psychiatric Research*, 2013)**
- **"These individuals still think they're special, entitled, and they want to be great, but they just can't do it," Krizan said. "As a result they're vulnerable, their self-esteem fluctuates a lot, they tend to be self-conscious and not very proactive, but passive, shy, and introverted."**
- **When the feeling of envy is added to the mix, Krizan said it can be a potentially dangerous combination. Though vulnerable narcissists are not as overt in their behavior, they may be more prone to unexpected outbursts of aggression. (Krizan, Johar. Envy Divides the Two Faces of Narcissism. *Journal of Personality*, 2012; 80 (5): 1415 )**

# THE ART AND SCIENCE OF HEALING

- Researchers administered a 40-item narcissism questionnaire that measures five different components of the personality trait. Two of these components are more maladaptive, or unhealthy -- exploitativeness and entitlement; and the other three are more adaptive, or healthy -- leadership/authority, superiority/arrogance, and self-absorption/self-admiration.
- Narcissism were associated with higher cortisol in male participants, but not in females.
- HPA axis may be chronically activated in males high in unhealthy narcissism, even without an explicit stressor.“ (University of Michigan (2012, January 23). Expensive egos: Narcissism has a higher health cost for men. *ScienceDaily*. Retrieved September 2, 2013, from <http://www.sciencedaily.com>

# THE ART AND SCIENCE OF HEALING



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# THE PLACEBO EFFECT

- **Gura, Trisha. *When Pretending Is the Remedy*. Scientific American Mind. March/April, 2013, pgs. 34-39.**
- **Placebos without Deception: A Randomized Controlled Trial in Irritable Bowel Syndrome. Kaptchuk et al. *PLOS One*, Vol. 5, No. 12, Article No. e15591; December 2010.**
- **How Expectations Shape Pain. Wager and Atlas. *Neuroscience Letters*, Vol. 520, Vol. 2, pages 140-148; June 29, 2012.**