
Selena Chan, DO
Integrative Psychiatrist
Clinical Fellow
Promoting Healing and Wellness

Conventional Psychiatry & Mental Health Care

Self-Care

Complementary & Alternative Medicine

Integrative Psychiatry

Lifestyle Medicine

Integrative Mental Health Care
Culture + upbringing shapes the individual’s life story.

Humanistic Medicine + Mind-Body Relationship

The “Tribe”: Integrative Health Community: Inclusion + Interaction of Diverse Healing Paradigms

Psychiatry: Emotional + Physical dimensions of Whole Person medicine

Tenants of Osteopathic Medicine
1. The body is completely united; the person is a fully integrated being of body, mind and spirit
2. The body is capable of self-regulation, self-healing, and health-maintenance
3. Structure and function are reciprocally interrelated

More than Just symptoms + a diagnosis: Expanding how we define illness, health, and self-care

A Narrative: not linear but a series of interconnected circles | both Unique + Shared
Perspectives & Point of View of Mind-Body

- Medical Team Lens
- Support System Lens
- Societal Lens
- Historical Lens
- Personal Lens
- Scientific Lens

Your Journey

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Stone Age
Skull Trepanation

Symptoms:
- Behaviors deviating from norms (psychiatric / neurologic)
- Headaches

Cause:
- Evil Spirits

Treatment:
- Drill burr hole into skull until brain tissue showed
- “release evil spirits”

Now called craniotomy
- Subdural and Epidural hematomas

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Ancient Greece
Temperament of “four humors”

- **Hippocrates**
  - ”Father of Modern Medicine”
  - The Hippocratic Oath is still taken by all physicians today

- **Reductionistic**
  - Reducing complex states into simpler, physical terms
  - Simple humoral imbalance → complex emotional causes

- **Antidotes**: Treatments of opposites
  - Excess humors → Deplete humors
    - Bloodletting (leeches)
    - Purging
  - “Hot” diseases (fever) → treat with “Cold” medicines

"Those maddened through bile are noisy, evil-doers and restless, always doing something inopportune” – from Hippocratic Corpus

<table>
<thead>
<tr>
<th>Blood Spring</th>
<th>Yellow Bile Summer</th>
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<tbody>
<tr>
<td>“Sanguine” Enthusiastic + Social</td>
<td>“Choleric” Angry + Impulsive</td>
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<tr>
<td>Phlegm Autumn</td>
<td>Black Bile Winter</td>
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<tr>
<td>“Phlegmatic” Apathetic</td>
<td>“Melancholic” Sad + Depressed</td>
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Ancient Greece
Hippocrates: “Hysteria”

“Hysteria” felt by men to be reason why women were unable to make rational decisions → women had few rights

- **Hystera is Greek for uterus**
- **Symptoms:**
  - “Excessive emotion” conveying a sense of suffocation or distress
  - e.g., high anxiety, respiratory/intestinal distress
- **Proposed Cause:**
  - Dry uterus wanders in body in search for moisture and pushes on body parts communicating distress
- **Treatment:**
  - Pleasant vs. repelling aromas to "put the uterus back in place"

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100’s AD: **Galen**

Dissecting Illnesses of the Body

Compartmentalizing emotion

Galen – physician of Roman Empire

- Loyalist of theory of humors
- Deeply respected for **skill of differentiating illnesses**
  - Galen’s reports of anatomical dissection
- Reductionist: **Separation of Illness**
  - Organic vs. “Non-organic"
- Galen’s theories were mainstay of Western medical science for 1,500 years

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100’s AD: Galen
The woman with insomnia

“... she was suffering from a melancholy dependent on black bile, or else trouble about something she was unwilling to confess.”

As quoted in Galen--On Mental Disorders, Stanley W. Jackson

1. Galen rules out humoral causes
   • Today: “Rule out physical illness”

2. Physical exam / “test”
   • Saying famous dancer’s name → sudden irregularity of pulse
   • clue to the “agitated mind”

3. Diagnosis:
   • Emotional cause of “dis-ease”
     • In love with the dancer

“On the Diagnosis and Cure of the Soul’s Passion”
• Galen’s Manual on treating psychological symptoms
• Suggested counseling patients to explore deepest self (early form of psychotherapy)

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100’s AD: **Galen**

Six “Non-Naturals”

- “Non-naturals”
  - Outside of body = Not innate
  - **Environmental factors** involved in the preservation of health

In other words:
- Illnesses Prevention
- Health Promotion

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The Middle Ages

- Mental Illness thought to be caused by curse, wrongdoing or sin

- Supernatural theories of mental illness
  - Demonic Possession
  - Witchcraft / “Black magic”
  - “Evil eye” / Cursed
  - Religious punishment

- Rituals to allow spirits to leave head
  - Trephining (hole into skull) to release evil spirits
  - Exorcisms, magic spells
  - Religious practices
18th Century: The Asylum for “otherness”
Pinel: Humane treatment

- Mental illness stigmatized – Asylums
  - No windows
  - Chained to beds, beaten
  - Little contact with caregivers

- Focus was to ostracize those with psychological disorders from society

Late 1700’s:
French physician, Phillippe Pinel
- Advocated for humane, moral treatment
  - Prison vs. Hospital
  - Unchained, ability to leave asylum
  - Valued emotions + social interactions
Effect of common 19th century treatments on mind-body
Mercury + Cocaine

• Mercury (Calomel):
  • Antiseptic/Diuretic/Laxative
  • Toxic effects: blindness, memory loss, numbness, seizures

• Cocaine:
  • Local anesthetic in lozenges + toothache drops
  • Coca-Cola in late-1800’s:
    • Coca leaves + Kola nuts
Effect of common 19th century treatments on mind-body
Morphine + Heroin

**Morphine:**
- To **control cough**/ diarrhea
- To **soothe infants and children**
  - Mrs. Winslow’s Soothing Syrup had 65 mg of pure morphine per fluid ounce

**Heroin**
- Cough suppressant
- Marketed as “non-addictive” substitute for morphine
  - Not banned until 1924
Therapeutic Seizures

• 1500’s - Camphor
  • to induce seizures and treat mental illness

• 1920’s - Insulin Shock Therapy
  • Purposeful insulin overdose → cause convulsions → treat schizophrenia

• 1938 - Electroconvulsive Therapy (ECT)
  • By Ugo Cerletti and Lucio Bini:
    • Use of electricity → induce a seizure → first successful treatment of a patient with schizophrenia

• Today - ECT for “reboot” of brain chemistry … under more regulated conditions
  • Unlike what is depicted in movies:
    • General anesthesia + muscle relaxer
    • Very brief, low-intensity electrical pulse
1930’s – 1950’s: “Ice Pick” Lobotomy

“Surgery for the Soul”
- To stabilize intense emotions
- (psychosis, depression, anxiety, pain

Procedure:
- Doctor drove slender instrument through the tear duct
- ... hammered until breaking part of skull protecting prefrontal cortex

“Revolutionary treatment”
- Psychiatrist, Walter Freeman won Nobel Prize in 1949
- Procedure phased out with development of antipsychotic medications towards 1950s

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Perspectives & Point of View of Mind-Body

Scientific Lens

Medical Team Lens

Support System Lens

Personal Lens

Historical Lens

Societal Lens

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“Mind Over Matter”
Use of willpower to overcome physical issues

Expression + recognition of mental health: shaped by personal values and viewpoints

Speaking from my own lens as an Asian-American:

- Social stigma and shame to those seeking behavioral health services
- High emphasis on family unit, bringing honor to the family
- More likely to express mental illness as physical symptoms
Perspectives & Point of View of Mind-Body

- Scientific Lens
- Medical Team Lens
- Personal Lens
- Your Journey
- Support System Lens
- Historical Lens
- Societal Lens

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17th Century: Descartes Mind Body Dualism

**The Body** = Matter

“Res Extensa”
Takes up space, non-thinking

**The Brain**
physical matter

**The Mind**
= Substance that **thinks**

“Res Cognita”
(non-material, conscious)
"lever" controlling machine (body)

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The unique, complex mind

Experience of emotion + suffering is unique to the individual

Scientist’s lens
“outside the box”
Not tangible
Difficult to pin down concrete elements

Not valid

Risk of suggesting that a person suffering emotional illness is feigning illness

May influence individuals/caregivers quest to seek extensive lab/imaging workup to find “biological root causes”

Scientist Lens

- **Evidence/Facts**: Objective, concrete
- **What are the patterns and why do I see them?**
- **Can I come to a generalized conclusion?**

- **Validity**
  Test measures what it’s supposed to measure

- **Reliability**
  Same results each time (consistency)
Perspectives & Point of View of Mind-Body

Scientific Lens

Medical Team Lens

Support System Lens

Historical Lens

Personal Lens

Societal Lens

Your Journey

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What is Conventional / Mainstream Medicine?

• Dominant health system based on culture and historical period
  • Medical interventions meeting accepted standards of care
  • Training taught at U.S. Medical schools and Residency programs

Today: Conventional medicine = Biomedicine / Western Medicine

• 1910: “Flexner Report”
  • Called for strict adherence to evidence-based, scientific studies
  • Standardization of US and Canadian Medical School Education
Today: Mind Body Dualism

If Practitioner / patient / supports think presentation is “organismic”

- **Psychiatric work up**
  (e.g. review medications / check blood/urine for presence of drugs / substance / electrolyte / hormonal imbalance, infection, injury etc)

+/- **Internal Medicine / Hospitalist Consult!**
  (less stigma going this way... why is this?)

If Psychiatrist / therapist / patient / supports think presentation is “Medical Mimic” or “diagnosis of exclusion” ➔ Psychiatry Team Consult (Consult-Liaison team):
  “Evaluate for “Psychosomatic” disorder”

Today: General Internists
Scientific Study of Body Systems
Reductionism: Biomedicine

Pros:
- Clear boundaries offer certainty
- Good for acute, life threatening diseases

Example:
- Concrete signs
  - acute, pain localized to right lower abdomen, fever
  - help diagnosis (appendicitis)
- Want a specialist (surgeon) to preform specialized treatment (appendectomy)

The Body:
- Concrete
- Tangible
- Fits in a box

Risk for labeling illness as
“Not Real”
“Feigned”
Scope of Practice
- by organ system
- by stage in life

Medical specialists
Expert, focused lens

- Cardiologist (heart)
- Dermatologist (skin)
- Gastroenterologist (stomach)
- Hematologist (blood)
- Neurologist (brain)
- Nephrologist (kidneys)
- Ophthalmologist (eyes)
- Otolaryngologist (ears, nose, throat)
- Obstetrician (pregnancy)
- Pulmonologist (lungs)
- Rheumatologist (joints, muscles, autoimmune)
- Urologist (urinary tract, male reproductive)
- Gynecologist (female reproductive)
- Geriatrician (Older adults)
- Psychiatrist (mind)
- Pediatrics (Children)
- Geriatrician (Older adults)

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Conventional Psychiatry Today

• **Biopsychosocial formulation** of the unique individual

• **Differential Diagnosis:** “organic” illness versus psychiatric illness
  • Labs
  • Imaging

• Psychiatric Treatments:
  • **Medications/Procedures:**
    • Presumed dysfunction at the level of neurotransmitters or brain circuits
  • **Psychotherapy**
  • **Mind-body therapies** (Mindfulness)
### Biopsychosocial Model + 4 P’s
**Standard in Conventional Psychiatry**

**Personal Viewpoint**

#### Predisposing
- Genetic history
- Temperament
- Intellectual disability
- Perinatal toxin / infection exposure
- Head Trauma

#### *Precipitating*
- Medical illness
- Physical injury
- Toxins / Infections
- Neurological / Hormonal / Electrolyte imbalances, etc

#### Perpetuating
- Lack of self-care (e.g. lifestyle foundations like diet, exercise, sleep)
- Substances / alcohol
- Uncontrolled chronic illnesses

#### Protective
- Good general health
- Regular self-care practices
- No family history of medical / psychiatric illnesses

#### Stressors
- Adverse Childhood Experiences (ACE)
- Childhood Trauma / Neglect

- Diagnosis of major or terminal illness
- Death of loved one
- Divorce
- Providers move out of town
- Stage of Life / Illness

- Psychological Defenses
- E.g. isolation of affect or reaction formation (protective but prevents working through trauma)
- Hostility towards others

#### Vulnerabilities
- Poor role models
- Taught to solve problems through violence
- Limited / inadequate schooling

- Moving to a new location / city
- Loss of job
- Non-compliance with treatment (cost, practicality)
- Ending of a treatment component (ex: insurance doesn’t cover therapy)

#### Maintains or exacerbates illness
- Poor access to healthcare
- Limited financial resources
- Poor social supports
- Unsupportive family

#### Timing

- Good self-soothing and distress tolerance skills / problem solving skills
- Good perseverance in the face of adversity
- Intact reality testing

- Good Access to healthcare
- Strong / Stable financial resources
- Supportive family
- High educational attainment
- Lives in long term home

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George Engel: “Why does **this patient** have this disease **now**?”

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3 Reasons Behavioral Medicine is Uniquely Situated to Bridge Biomedicine, inclusive of an array of healing modalities

**Integrative Medicine**

An approach to healing that explores the whole person, including individual values and lifestyle, while making use of all appropriate and evidence-informed therapeutic modalities, healthcare professionals and disciplines to promote optimal well-being.

**Unique, Whole-Person**
- Biopsychosocial Formulation
- Emphasis on uncovering context in which symptoms arise

**Mind-Body**
- Bidirectional
- Appreciation of healing on multiple levels

**Therapeutic Alliance**
- Partnership between the individual and those that contribute to their care
Integrated Care (Medical Home model)

Patient-centered care / Collaborative treatment team
- Primary Care Physician + Behavioral Health Integration
- + Central care coordinator

Goals:
- Improved access to care
- Support continuity of care and adherence
- Early-detection, prevention and treatment
- Promote education amongst providers and patient’s support network
  - Lessen stigma associated with mental illness

Integrative / Holistic / Complementary / Functional / Alternative Medicine
Evolving Terminology

Fluidity in terms reflected at National Institute of Health (NIH)

ALTERNATIVE Medicine

IN PLACE OF conventional medicine

Office of Alternative Medicine
1991

COMPLEMENTARY Medicine

TOGETHER WITH conventional medicine

National Center for Complementary and Alternative Medicine (NCCAM)
1998

INTEGRATIVE Medicine

Together with conventional medicine WITH COORDINATION OF PROVIDERS

National Center for Complementary and Integrative Health (NCCIH)
2014

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NCCAM: 5 domains of Complementary & Alternative Medicine (CAM)

-Whole Medical Systems / Traditional Medicine
-2014: NCCIH
-2 broad subgroups:
  - Natural Products or Mind and Body practices
  - Less conventional Biological
  - Mind-Body

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Complementary Health Approaches

- National Health Interview Survey (NHIS)
  - NIH annual survey to 35,000+ households
  - Questions about complementary health approaches every 5 years
    - 90,000 adults surveyed in 2012
    - Results published in 2015

- ~1/3 used a complementary health approach annually
  - 32.3% in 2002
  - 35.5% in 2007
  - 33.2% in 2012

*Trends in the Use of Complementary Health Approaches Among Adults: United States, 2002–2012 (Clarke et al, 2015)*
2012 National Health Interview Survey: Mind Body Practices

#1 Yoga 9.5%
#2 Chiropractic or Osteopathic manipulation 8.4%
#3 Meditation 8%
#4 Massage Therapy 6.9%

- Analyzed 2007 NHIS results (over 23,000 U.S. adults)
  - *depression, anxiety, insomnia, attention deficits, headaches, excessive sleepiness, and memory loss

- Adults with at least one neuropsychiatric symptom had a greater prevalence of CAM use
  - 43.8% versus 29.7%

- More neuropsychiatric symptoms: more likely to use CAM
  - Particularly mind-body medicine

- 1/5 used CAM because standard treatments too expensive or ineffective

- 1/4 used CAM as recommended by a conventional provider
The term, “Mind-Body”

- Mind
- Body

Dualism Separate

Biomedical Model

Non-duality inseparable

Integrative, Whole Person

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Phrases to express anxiety, elation, surprise...
clue into Mind-Gut-Brain connection

“gut wrenching experience”

“a pit in my stomach”

“butterflies in my stomach”

“I’ve got a gut feeling about it”
The Hydra

- Primitive Marine Animal
- Floating digestive tube surrounded by nerve net

Theories:

1. Algae in ocean settled inside digestive system of the Hydra
2. Microbes started living inside system: Used own communication signals developed over 4 billion years in oceans, producing neuroactive substances
3. Microbes started to communicate with nerve cells of the hydra
The first brain: Species comparisons and evolutionary implications for the enteric and central nervous systems

J. B. Furness¹,² | M. J. Stebbing¹,²

Abstract

Background: The enteric nervous system (ENS) and the central nervous system (CNS) of mammals both contain integrative neural circuitry and similarities between them have led to the ENS being described as the brain in the gut.

Purpose: To explore relationships between the ENS and CNS across the animal kingdom. We found that an ENS occurs in all animals investigated, including hydra, echinoderms and hemichordates that do not have a CNS. The general form of the ENS, which consists of plexuses of neurons intrinsic to the gut wall and an innervation that controls muscle movements, is similar in species as varied and as far apart as hydra, sea cucumbers, annelid worms, octopus and humans. Moreover, neurochemical similarities across phyla imply a common origin of the ENS. Investigation of extant species suggests that the ENS developed in animals that preceded the division that led to cnidaria (exemplified by hydra) and bilateria, which includes the vertebrates. The CNS is deduced to be a bilaterian development, later than the divergence from cnidaria.

Consistent with the ENS having developed independent of the CNS, reciprocal connections between ENS and CNS occur in mammals, and separate neurons of ENS and CNS origin converge on visceral organs and prevertebral ganglia. We conclude that an ENS arose before and independently of the CNS. Thus the ENS can be regarded as the first brain.

KEYWORDS
central nervous system, enteric nervous system, evolution, neurotransmitters, serotonin
Gut has a “mind of it’s own” but also communicates with brain and informs our state of mind

• **Enteric Nervous System (ENS)**
  - Neurons lining the gut → own reflexes and senses
  - Unique ability to function independently of the Central Nervous System (CNS)

• **Vagus nerve: “rest and digest”** - *intimately tied with the gut*
  - Vagus Nerve Stimulation – treatment for depression

• **Gut bacteria (probiotics) produce and respond to same neurotransmitters brain uses to regulate mood / cognition**
  - GABA, Serotonin, Norepinephrine, Dopamine, Acetylcholine, Melatonin

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• Gut makes 3/4 of neurotransmitters
  • 95% of serotonin is found in gut
  • Side effects of antidepressants affecting serotonin – gastrointestinal distress

• Bidirectional communication:
  • Gastrointestinal distress ➔ anxiety / depression
  • Stress / anxiety / depression ➔ affect movement and contractions of gastrointestinal tract
Biomedical model: Differential diagnosis of Psychiatric illness
The search for organic / “physical” root causes

Examples for Anxiety “differential”

- Stimulants
  - Cocaine, Caffeine, Thyroid hormones, Steroids
- A withdrawal from a CNS depressant
  - Withdrawal from Alcohol, Benzodiazepines, Opiates
- Endocrine/Hormone (stress response)
  - Hyperthyroidism, hypoglycemia, Pheochromocytoma
- Think of systems affected in anxiety attack (can’t breathe, heart races)
  - Pulmonary embolism, hypoxia, hyperventilation
  - Cardiac Arrhythmias

Examples for Depression “differential”

- Anything affecting sleep, fatigue, drop in function
- Any kind of stimulant withdrawal
- Autoimmune, Cancer, Infections
- Endocrine/Hormones
  - Adrenal (Addison’s disease, Cushing’s)
  - Hypothyroidism, Hyperparathyroid
- Medications associated w/ depression
  - IFN-alpha
  - HIV meds
  - Accutane
  - Barbiturates

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Back to “Hysteria”

- Questioned validity of hysteria as “real” disease
  - Individual thought to be mimicking symptoms of other more definable diseases

- Became an umbrella term for less definable illness
  - Anxiety, shortness of breath, fainting, insomnia, irritability…
“Hysteria” Evolution of terms

Functional Neurological Symptom Disorder (DSM-5, 2013)

17th Century
Thomas Sydenham
• British physician known for writing the standard textbook of medicine of the time
• Questioned if hysteria was actually a disorder of the brain and nervous system

19th century
Sigmund Freud
• Austrian neurologist and the father of psychoanalysis
• Hypothesized that an unconscious, unresolved mental conflict converted into somatic symptoms, and classified this phenomenon as, “Conversion disorder.”

DSM-III-R in 1980
Diagnosis, “Hysterical neurosis, Conversion type”
→ replaced with “Conversion disorder”
• Defined as a mental condition in which signs and symptoms affecting voluntary motor or sensory function “could not be explained by a general medical condition.”
• In a biomedicine framework, this diagnosis required confirmation by a neurologist that the patient’s presentation was “nonorganic.”
Functional Neurological Symptom disorder

- Previously termed “Conversion disorder”
- Sudden loss of sensory/motor function
- Typically when hospital psychiatry team is consulted when illness “can’t be explained medically”

Risk Factors

- **Trauma may have a symbolic meaning**
  - E.g. Saw husband cheating → sudden blindness
  - Typically has seen someone with illness
- **Difficulty using words to describe how they are feeling… so body communicates for them**

**Emotional Constipation!**

Treatment:
learning ways to express emotion (vs. rejection)

**Biomedical Tests**

- **Psychogenic Non-Epileptic Seizures (PNES) “Pseudoseizures”**
  - Absence of prolactin elevation / epileptiform activity (long-term video monitoring of brain activity)
- **Weakness**
  - Arm drop test: Doesn’t hit face
- **Blindness**
  - Optical kinetic drum test
- **Deafness**
  - Can you hear me?
  - Patient says no…

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Perspectives & Point of View of Mind-Body

- Personal Lens
- Medical Team Lens
- Scientific Lens
- Support System Lens
- Historical Lens
- Societal Lens

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Your personal lens

Your Assumptive world: Unique viewpoint of self experiences

Individual thoughts / ideas ➔ Influences behavior / actions

Personal way of experiencing emotions + sensations

Unique Biological-Psychological-Social-Cultural-Spiritual framework

Assigns valence: (+) Positive vs. (-) Negative
Changes in view: “Cognitive Distortions”

Size of lens

Magnify (worst case scenario)
Catastrophizing

Minimize (positive details)
Discounting the positive

Polarized Filters/Colors

Mental Filter
Only one color
Overgeneralization

Only black and white
All-or-Nothing thinking

Labeling: “I’m a failure”

Special Power of Lens

Far-sighted
Jumping to conclusions: Fortune telling

Into the minds of others
Jumping to conclusions: Mind-reading

“I see it ... it must be true”
Emotional Reasoning
(I feel it, therefore it must be true)

Custom-made lens
Personalization / Blame
Perspectives & Point of View of Mind-Body

- Medical Team Lens
- Support System Lens
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- Societal Lens

Your Journey
Is Your Viewpoint: **Relatable?**  
**Human nature to look for patterns/rerelationships**

Your Lens: Personal, unique viewpoint on illness/health:

- Different lens color but **overlapping features/similar fit**
- Greater chance of **relating to your viewpoint**

Communicating personal experiences of illness by finding shared features:

- “Our glasses have gradients of color”
- “We have both gone through a grieving process”

Different shape, lens color, fit

**Low chance of seeing your point of view**

= risk for stigmatized/marginalized view:

**Labeling you as “Other”**
Growth & Evolution

Yosemite National Park

The tree growing out of the rock
Growth together: the tree and family
What constitutes healthy growth in relationships?

**Disconnection**
1. Suffering, Fear, Vulnerability
2. Desire for reconnection
3. Creates opportunity for growth

**Mutual development**
To affect & be affected by relationships

**Empathy**
Sensitivity to impact of your actions on others

**Authenticity in Relationships**
Sharing inner experiences, thoughts, feelings (may promote authenticity in return)

**Separation from early relationships**
Promotes growth into an independent, self-reliant individual

**Autonomy & Self-fulfillment**

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Mirror Neurons: special empathy lens

“By helping us recognize the actions of other people, mirror neurons also help us to recognize and understand the deepest motives behind those actions, the intentions of other individuals.”

- Iacoboni, Marco, Mirroring People

- Suffering & Pain
  - e.g. facial expressions

- Fictional Characters
  - (movies, books)

- Watching movement
  - e.g. sports
Gradients of Trauma & Suffering
Stress

Now! (acute)

Long-term (chronic)

Body’s 3 automatic stress responses
Designed to protect us from danger

Life Challenges

“Fight”

Move toward

“Freeze”

“Flight”

Move away

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Gradients of Trauma / Stressors: Specific to individual lens of suffering

- Physical, sexual, emotional abuse, neglect, abandonment
- Common stressors, life challenges, and transitions: injury or grief
  - Change in identity or role
    - Diagnoses of an illness and fear of recurrence, loss of a job
  - Loss of a loved one or relationship
    - Includes changes in personality and cognition (e.g., dementia)

Post-Traumatic Stress Disorder (PTSD): Trauma + “RAIN”

- Reactivity & Hyperarousal
- Avoidance
  - Flashbacks
  - Nightmares
- Intrusion
- Negative Mood & Cognition

Stressor

×

1+ month

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1. Parent is physically present …but emotionally absent
   Not blaming parents - working though stressor themselves

2. Child learns that own needs are not as important
   
   **Key: Child’s perception of attachment to parent**
   • Even if child has a stereotypically “good childhood” by cultural/societal view

3. Child conjures up maladaptive thought:
   • “If I show my emotions, it only adds to parent’s load”
   • Child learns to suppress own needs/emotions in order to maintain attachment relationship with parent

4. Emotional needs unfulfilled ➔ Emotional Constipation!
Lifelong patterns: Emotional Constipation

Values of “push through” mentality, duty, and self-sacrifice

1. Individual learns to express high concern for emotional needs of others ...while suppressing own needs
2. Stress-adrenaline patterns give you energy to push through
3. ...until you rest ...and neglected needs surface again
   • e.g., Getting sick after a stressful project is complete

Is illness one way body signals that emotional needs are neglected?
• “Wake up call”
• Stimulus for behavior change

May influence career choice:
• Drawn to professions where helping & healing are highly valued
• Empathic traits valued
• Addiction: "Workaholism"
Trauma and Addiction

Whether it is the workaholism of the healthcare provider or the ingestion of a substance ... may be attempts to soothe pain + escape from distress

- **Opiates**
  - Soothes both emotional and physical pain

- **Cocaine / Alcohol**
  - Local anesthetics

- **Stimulants**
  - Cocaine / Amphetamines / Caffeine
  - (+) Dopamine

- **Emotional rejection**
  - Same parts of brain light up as if you had stuck them with a knife

- **Infant monkey separated from mothers**
  - (-) Dopamine in PFC

- **Maternal Depression**
  - (+) Cortisol (placenta)
  - Potential attention issues

**Motivate Action**

**Pain**
Healing Emotional Constipation

1. **Learn to invite feelings (versus reject)**
   - Akin to Mindfulness
     - Presence, attuned to body cues
     - Non-judgmental, Self-compassion
     - Open and self-aware

2. **Integrative Therapies for Trauma…**
Amidst the darkest life challenges, how do we deepen our capacity to live life fully?

“It is not in the still calm of life, or the repose of a pacific station, that great characters are formed. The habits of a vigorous mind are formed in contending with difficulties.”

– Abigail Adams
Neurobiology of Healing Trauma with Integrative Modalities

Following analogy inspired by,

“The Body Keeps the Score: Brain, Mind, and Body in the Healing of Trauma”
By Bessel Van Der Kolk’s M.D. (psychiatrist)
Then, the thalamus can take 2 pathways to emotional brain:

- **Amygdala**
  - **Primitive/emotional brain**
  - *First dibs on deciding if there is a threat (before one is fully conscious of danger)*

- **Medial Prefrontal Cortex**
  - *Takes several milliseconds longer*

--- or ---

**Thalamus**

- **Filter**
  - Filters out irrelevant input
  - *Trauma: Constant sensory overload*  
    - Can’t shut down

- **Mixer**
  - Stirs sensory input into integrated, coherent soup
  - *Trauma: Isolated sensory fragments*
Smoke Alarm

- Incoming input: **threat to survival?**
- Elicits help of next door neighbors:
  - **Hypothalamus**
    - Prepares for fight / flight / freeze
    - (+) Autonomic Nervous System
      - Pushes out Cortisol and Adrenaline
    - ...Once danger has passed, body returns to normal state
  - **Hippocampus**
    - Relates new input to past experiences

In Trauma...

Hypervigilant Amygdala ➔ Hyperactive alarm system

- **Misinterprets** whether situation is dangerous or safe
  - ➔ prolonged startle or aggressive outbursts
    - May attempt to numb strong sensations through substances /self-injurious behaviors
In Trauma, mPFC is hypoactive. Emergency response system dominates → may be more difficult to control emotions / impulses.

**mPFC = Rational / Conscious brain**

- Directly above the eyes → *big-picture view*
- Refines interpretation of what’s going on *before reacting*

As long as you are not too upset...

**…mPFC helps you realize threat = false alarm**

- “Oh, actually my house is not on fire.”
- "The smoke alarm went off because I’m cooking.”
Overview of top down and bottom up approaches to address trauma

**Top down**
Strengthen vmPFC
Watchtower hovers calmly, objectively over thoughts
e.g. *Mindfulness*

**Bottom up**
Tone down Amygdala
No longer falsely reactive
Smoke alarm knows you are cooking and
house is not on fire

Accessing Autonomic Nervous System:
*Integrate breath, movement, touch*
e.g. Yoga, dancing, playing music, bodywork
Toning down Hyperactive

Bottom up approach

• How?
  • **Recalibrate Autonomic Nervous System (ANS)**
    • Back to the basics: assess breath, movement, and touch

• Goal?
  • Adjust smoke alarm so it’s no longer falsely reactive
  • Restores normal job of emotional brain: quiet background presence 😊
    • Appropriately defends against danger
      • Takes care of body housekeeping (ensuring you eat, sleep, etc)
      • Supports connection and protection of your loved ones
Toning down Hyperactive Amygdala

Bottom up approach

- Meditation, Yoga
- Dancing & Expressive Movement Therapy
- Martial arts / Capoeira
- Tai Chi / Qi Gong
- Drumming
- Chanting & Choral singing
  - Yoga
    - Embedded in some religious practices

Breathing

Selena Chan, DO
**Biofeedback**
- Monitors psychophysiological changes in HR, breathing patterns, exhaled CO2 levels, skin temperature, sweat gland activity, and muscle tension

**Touch**
- Natural way for humans calm down distress and reduces excessive arousal
  - e.g., Hugging friend when distressed

**Bodywork**
- ex: Massage, Craniosacral therapy

**Sensory Integration clinics**
- Diving into tubs filled with multicolored rubber balls, mats, swings!
Goal?

• **Hover calmly and objectively over thoughts 😊**
  • Taking time to respond
    • Allows executive brain to inhibit or modulate hardwired automatic reactions

• Prerequisite for safely revisiting trauma?
  • Learning to observe and tolerate physical reactions

• **How? Strengthen watchtower’s ability to monitor sensations**
  • Promotes sense of autonomy, Improves self-awareness and interoception
  • Tune attention towards thoughts, emotions, and physical sensations
**Strengthen Hypoactive**  
*Top down approach*

E.g. **Mindfulness / Meditation / Yoga**

1. Allow mind to **focus on sensations**

2. Notice that in contrast to ever-present experience of trauma…  
   - **physical sensations** are transient  
     - Slight shifts in **body position, breathing**  
     - Can practice applying to shifts in **thinking**

3. **Label** physical sensation  
   Ex: “When I feel **anxious**, I feel a **crushing sensation** in my chest.”

4. **Notice how sensation changes** when taking a deep breath out?

   ← both conscious and autonomic control
Almonds and Presence

Video from University of Wisconsin Integrative Medicine Program

Selena Chan, DO
**Trauma:**
- The individual is engulfed by sensory/emotional elements of the past
- **Traumatic event has a life of its own… 😊**

---

**Repairing the Thalamus**

**Filter and Mixer appropriately process stimuli**

**Filter:**
- Avoids sensory overload

**Mixer:**
- Integrates traumatic sensory fragments

---

**How?**
- Reprocess trauma in safe way
  - **Put trauma into proper place in the overall arc of one’s life.**
Repair the Filter + Mixer to appropriately process stimuli

- **Eye Movement Desensitization & Reprocessing (EMDR)**
  - bilateral sensory input (side-to-side movements) during therapy
    - Theorized association with Rapid Eye Movement (REM) sleep
    - Dreaming - forging new relationships of unrelated memories

- **Goal: put traumatic experience into a larger context or perspective**
  - Allows patient to access/reprocess traumatic memories in a controlled, safe environment
  - No need to verbalize trauma
    - Avoids re-traumatization
Overview of top down and bottom up approaches to address trauma

**Bottom up**
- Tone down Amygdala
- No longer falsely reactive
- Smoke alarm knows you are cooking and house is not on fire
- Accessing Autonomic Nervous System: Integrate breath, movement, touch
  - e.g. Yoga, dancing, playing music, bodywork

**Top down**
- Strengthen vmPFC
- Watchtower hovers calmly, objectively over thoughts
  - e.g. Mindfulness
With Loving Kindness,
Thank you for sharing your lens with me!

Selena Chan, DO
Resources

THE BODY KEEPS THE SCORE
BRAIN, MIND, AND BODY IN THE HEALING OF TRAUMA
BESSEL VAN DER KOLK, M.D.

When the Body Says NO
EXPLORING THE STRESS-DISEASE CONNECTION
GÁBOR MÁTÉ, M.D.

The Relaxation Response
How To Counteract the Harmful Effects of Stress
HERBERT BENSON, M.D.

MIRRORING PEOPLE
The Science of Empathy and How We Connect with Others
MARCO IACOBONI

life after the diagnosis
Expert Advice on Living Well with Serious Illness for Patients and Caregivers
STEVEN PANTILAT, MD

Selena Chan, DO
Whole-person care

Our comprehensive, team-based approach acknowledges all aspects of each individual — body, mind, and spirit.

Equity

We welcome and respect all people, value diversity, and strive for inclusivity. We are committed to improving integrative health care for members of medically underserved communities.

Compassion

We foster empathy and attend to the influence of social, cultural, and historical contexts on health, health behaviors, and access to health care.

Collaboration

We promote interprofessional teamwork among our clinicians, educators, and researchers, and build partnerships across UCSF and internationally.

Focus on wellness

We emphasize health promotion and illness prevention, as well as treatment of disease.

Empowerment

We provide resources and tools that cultivate resilience and engage each person’s unique healing abilities.
Osher Center for Integrative Medicine: Patient Care

Integrative Medicine Consultation
Our practitioners assess each patient’s individual needs and listen to their concerns and goals for well-being, then offer a professionally guided whole-person approach to their health care.

Integrative Cancer Care
Our oncology professionals provide patients and families with holistic, personally oriented recommendations and an integrated treatment plan.

Integrative Psychiatry and Psychotherapy
Address life challenges, such as chronic illness, physical injury, or interpersonal loss, and develop the capacity to experience emotional well-being.

Integrative Pediatrics
Integrative Pediatrics offers a blend of conventional and complementary therapies to create a personalized plan that suits the needs of each child and family.

Integrative Women’s Health
Our integrative providers offer a range of options for managing women’s unique health needs across the lifespan.

Manual Medicine and Spinal Manipulation
Patients who are experiencing pain in their musculoskeletal system receive a thorough diagnosis and treatment of reversible functional problems of the muscles, joints, and spine.

Biofeedback
Biofeedback enhances your awareness of personal mind-body connections and helps you maintain relaxed awareness amidst chronic or acute stress.

Acupuncture and Integrative Chinese Medicine
Traditional Chinese medicine supports optimal health by promoting balance with the harmonious flow of blood and “qi” energy.

Ayurveda
Reintroduce and nurture balance in your life through specific diet and lifestyle practices from one of the oldest healing systems in the world.

Integrative Nutrition
Our integrative dietitian collaborates with patients and their healthcare providers to create a cohesive plan to meet the unique needs of each patient.

Guided Imagery
Guided imagery involves the focused and intentional use of imagery to aid healing, enhance peace of mind, and improve physical, emotional, or spiritual health.

Cognitive Behavioral Therapy for Insomnia
Cognitive behavioral therapy for insomnia is a treatment that has been proven effective in large studies of people with sleep problems.

Massage Therapy
Massage therapy may reduce stress responses, promote healing and relaxation, and help patients achieve a sense of well-being.
Integrative Psychiatrists

- Board-certified psychiatric doctors
- Trained in both conventional and complementary medicine

https://osher.ucsf.edu/patient-care/treatments/integrative-psychiatry-and-psychotherapy

For more information or to start the process of making an appointment and initial phone interview, call **415.353.7700**.
Integrative Mental Health: Treatment

Treatment plans are specific and unique to each individual and may include any combination of the following:

- Exploration into the interaction of the body, mind, spirit, and environment as a whole, with emphasis on accessing your own intuitive capacities to guide your life
- Conventional psychotherapies such as, cognitive behavioral therapy, insight-oriented therapy, dreamwork, symbology, and motivational interviewing
- Conventional medications, supplements, botanical, or herbal remedies
- Expressive or creative arts therapy
- Meditation, mindfulness, guided imagery/visualization, and relaxation
- Pharmacogenomic testing (identifies key genes in your body’s DNA that affect how it responds to medications, supplements, micronutrients, or foods)
- Ayurvedic massage, nutritional counseling, yoga and movement exercises, and mandala drawing
- Discussion of the range of available therapies that align with your values in collaboration with your health providers to create an integrated plan
The Osher Center for Integrative Medicine offers a variety of public classes, workshops, and therapeutic programs. Our programs emphasize patient empowerment and whole-person healing.

For questions about our classes or how to register, please call (415) 353-7718 or email classes@ocim.ucsf.edu.
Osher Center for Integrative Medicine: Public Classes

Communitas: Mind-Body and Resilience Group for Youth with Chronic Illness
Communitas is a group medical visit for youth living with chronic illness and their parents.

Cultivating Emotional Balance
Cultivating Emotional Balance (CEB) is an 8-week training that helps participants learn to build healthy emotional boundaries.

Laughter Yoga
This class involves deep breathing, stretching, clapping, and laughter exercises that offer powerful and immediate effects on mind, body, and spirit.

Laughter Yoga and Meditation
These classes begin with laughter exercises that warm up the mind-body and help generate mind-quelling, then shift to silent meditation, which helps to facilitate a gentle deepening of mindful awareness.

Living with Cancer Classes and Support Groups
People living with cancer and their caregivers are invited to attend any of our free mind-body wellness classes and support groups.

Meditation and Guided Imagery for People with Cancer and Caregivers
People with cancer and their caregivers are invited to join our free weekly meditation and guided imagery class.

Mindfulness-Based Stress Reduction (MBSR)
MBSR is an eight-week program that introduces participants to mindful practices to manage physical or mental distress, and maintain health and well-being.

Mindfulness MBSR Alumni Program
These weekly drop-in sitting meditation sessions are free and open to anyone who has ever completed a mindfulness-based stress reduction (MBSR) course at the Osher Center or elsewhere.

Mindfulness for Teens
This class offers teens powerful mindfulness-based tools to reduce stress, increase health and well-being, and follow through on personal goals.

Osher Mini Medical School for the Public
Members of the community can learn the information that is being taught in UCSF’s classrooms and research labs.
The Osher Collaborative for Integrative Medicine comprises an international group of seven academic Centers funded by The Bernard Osher Foundation to study, teach, and practice integrative medicine.

www.oshercollaborative.org
<table>
<thead>
<tr>
<th>Resource</th>
<th>Website</th>
<th>Comments</th>
</tr>
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<tbody>
<tr>
<td>Natural Medicines</td>
<td><a href="https://naturalmedicines.therapeuticresearch.com/">https://naturalmedicines.therapeuticresearch.com/</a></td>
<td>Dietary supplement database with interaction checker</td>
</tr>
<tr>
<td>NIH National Center for Complementary and Integrative Health (NCCIH)</td>
<td><a href="https://nccih.nih.gov/">https://nccih.nih.gov/</a></td>
<td>Evidence-based information on many complementary therapies</td>
</tr>
<tr>
<td>NIH Office of Dietary Supplements (ODS)</td>
<td><a href="https://ods.od.nih.gov/">https://ods.od.nih.gov/</a></td>
<td>Fact sheets and information on many dietary supplements</td>
</tr>
</tbody>
</table>

References

A History of Mental Illness Treatment. (2016, October 14). Retrieved from https://online.csp.edu/blog/psychology/history-of-mental-illness-treatment

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