TRAUMA, STRESS AND THE ARTS FOR HEALING

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**From Romanesque to Gothic Cathedral**

- Took many generations over considerable periods of time
- A lot of heavy lifting
- A lot of trial-and-error
- A lot of inspiration and innovation
- More windows - Let in light
- Stained glass - Multiple colors
- Higher, more expansive, more ethereal
- People could circulate, but still specialize in the radiating chapels
- Sound and music could radiate throughout the space
- Sense of limitless space reaching up into the unknown
THERE WAS a cultural explosion in the fourth and final act of our past. This happened in the time period 60,000–30,000 years ago, which

The four “chapels” of technical, natural history, social and linguistic intelligence, are in place.

But the walls of these “chapels” are solid; the chapels are closed to each other, trapping within them the thoughts and knowledge of each specialized intelligence.
The last REALLY big integration: the human mind
MIDDLE TO UPPER PALEOLITHIC TRANSITION

- Symbolic art
- Jewelry and pigments
- Language
- Burials and rituals (tragedy)
- Humor (comedy)
COG是没有

COGNITIVE ARCHAEOLOGY (Mithin, 1995)

Phase 1
- Minds dominated by a domain of general intelligence – a suite of general-purpose learning and decision-making rules.

Phase 2
- General intelligence has been supplemented by multiple specialized intelligences, each working in isolation from the others.

Phase 3
- Minds in which the multiple specialized intelligences appear to be working together, with a flow of knowledge and ideas between behavioral domains.
Communicating across domains
THE POISON IN OUR LIVES
“ONLY CONNECT!”

E. M. Forster, *Howard’s End*
Human history becomes more and more a race between education and catastrophe.

H. G. Wells

Outline of History, 1920
Can we consciously evolve quickly enough to avoid extinction?
CHILDHOOD ADVERSITY
MONOLOGUE
Amir, Inspired by Philly Young Playwrights youth authored works
The Relationship of Adverse Childhood Experiences to Adult Health Status

A collaborative effort of Kaiser Permanente and The Centers for Disease Control

Vincent J. Felitti, M.D.
Robert F. Anda, M.D.
Vincent J. Felitti, MD, is Co-Principal Investigator of the Adverse Childhood Experiences (ACE) Study, collaborative research between the Kaiser Permanente Medical Care Program and the Centers for Disease Control.

Robert Anda, M.D., M.S. played the principal role in the design of the ACE study, subsequent analysis of the ACE Study data, and preparation of its numerous scientific publications and serves as its Co-Principal Investigator.

1998: Little research available on effects of childhood adversity across the lifespan
In 1998, largest study of its kind ever (almost 18,000 participants)

Examined the health and social effects of adverse childhood experiences over the lifespan

Majority of participants were 50 or older (62%), were white (77%) and had attended college (72%).
ACE CATEGORIES
WHEN YOU WERE 18 OR YOUNGER

ABUSE
- PHYSICAL ABUSE
- SEXUAL ABUSE
- EMOTIONAL ABUSE
- PHYSICAL NEGLECT
- EMOTIONAL NEGLECT

HOUSEHOLD
- MENTAL ILLNESS
- SUBSTANCE ABUSE
- DOMESTIC VIOLENCE
- PARENTAL SEPARATION/DIVORCE
- INCARCERATION

1 POINT /CATEGORY – ADD TO GET TOTAL ACE SCORE
THE HIGHER THE ACE SCORE THE MORE LIKELY THE PERSON IS TO DEVELOP:

- HEART DISEASE
- PULMONARY DISEASE
- HEPATITIS
- DIABETES
- OBESITY
- STD’S
The higher the ACE score the more likely the person is to develop:

- Depression
- Suicide Attempts
- Revictimization
- Teen Pregnancy
THE HIGHER THE ACE SCORE THE MORE LIKELY THE PERSON IS TO DEVELOP:

ALCOHOLISM

OTHER SUBSTANCE ABUSE
THE HIGHER THE ACE SCORE THE MORE LIKELY THE PERSON IS TO DEVELOP:

- POOR SELF-RATED HEALTH
- POOR JOB PERFORMANCE
- VIOLENT RELATIONSHIPS
ACES AND COMORBIDITY

Given an exposure to one category...

- there is 80% likelihood of exposure to another.

As the number of ACE increases...

- the number of “comorbid” conditions increases.
Adverse Childhood Experiences play a significant role in determining the likelihood of the ten most common causes of death in the United States.

ACE Score of 0 - majority of adults have few, if any, risk factors for these diseases.

ACE Score of 4 or more - majority of adults have multiple risk factors for these
<table>
<thead>
<tr>
<th><strong>ACES SCORE OF 4 OR MORE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Twice as likely to smoke</td>
</tr>
<tr>
<td>Seven times more like to be alcoholics</td>
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<tr>
<td>Six times more likely to have had sex before the age of 15</td>
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<tr>
<td>Twice as likely to have been diagnosed with cancer</td>
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<tr>
<td>Twice as likely to have heart disease</td>
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<tr>
<td>Four times as likely to suffer from emphysema or chronic bronchitis</td>
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<tr>
<td>Twelve times as likely to have attempted suicide</td>
</tr>
<tr>
<td>Ten times more likely to have injected street drugs</td>
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</table>
The Philadelphia ACE Study

A collaborative, originally led by the Institute for Safe Families (ISF) and now by Health Federation, to develop and implement research, practice, and policies in urban pediatric settings based on the Adverse Childhood Experiences (ACE) study.
ACE Study Population is not Representative of Urban Populations

<table>
<thead>
<tr>
<th>Demographics</th>
<th>ACE Study</th>
<th>Philadelphia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age</td>
<td>56</td>
<td>34</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td>79% White</td>
<td>41% White</td>
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<tr>
<td></td>
<td>5% African American</td>
<td>43% African American</td>
</tr>
<tr>
<td></td>
<td>5% Hispanic</td>
<td>12% Hispanic</td>
</tr>
<tr>
<td>High school graduates</td>
<td>94%</td>
<td>36%</td>
</tr>
<tr>
<td>College graduates</td>
<td>43%</td>
<td>13%</td>
</tr>
<tr>
<td>Percent below FPL</td>
<td>Not measured</td>
<td>25%</td>
</tr>
</tbody>
</table>
# Philadelphia ACE Study Questions

<table>
<thead>
<tr>
<th>Conventional ACEs</th>
<th>Expanded ACEs</th>
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</thead>
<tbody>
<tr>
<td>Physical Abuse</td>
<td>Witnessing Violence</td>
</tr>
<tr>
<td>Emotional Abuse</td>
<td>Living in Unsafe Neighborhoods</td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>Experiencing Racism</td>
</tr>
<tr>
<td>Emotional Neglect</td>
<td>Living in Foster Care</td>
</tr>
<tr>
<td>Physical Neglect</td>
<td>Experiencing Bullying</td>
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<tr>
<td>Domestic Violence</td>
<td></td>
</tr>
<tr>
<td>Household Substance Abuse</td>
<td></td>
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<tr>
<td>Incarcerated Care Provider</td>
<td></td>
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<tr>
<td>Mental Illness in the Home</td>
<td></td>
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</tbody>
</table>
Overlap Between Exposure to Conventional and Expanded ACEs

- No ACEs: 17.2%
- > 1 Conventional ACE: 19.6%
- 1 Conventional ACE & > 1 Expanded ACE: 13.9%
- > 1 Expanded ACE: 49.3%
Total ACE Score ≥ 4 by Zip Code

**Health Statistics from these 5 Zip Codes**
- 22% of adults unemployed
- 46% of residents live in poverty
- Life expectancy for males age 68
- 22% of children obese
- Homicide rate 30 to 40 deaths per 100,000
THE POWER OF THE ACES STUDY

- ACEs are common
- ACEs are highly interrelated
- ACEs pile up and have a cumulative impact
- ACEs account for a large percentage of health and social problems
- Biologic plausibility
- It's easy to teach, easy to talk about compared to the intimate details of their experiences

The data tell a simple story — that’s the beauty of it.
WHAT ACES IS TELLING US:

AIMING AT INDIVIDUAL CHANGE IS NECESSARY BUT NOT SUFFICIENT
Parenting Under Stress
Tasha and Amir
Areas of the body affected by stress

- Brain and nerves
- Muscles and joints
- Heart
- Stomach
- Pancreas
- Intestines
- Reproductive system
KINDS OF STRESS

NORMAL STRESS

Positive
Tolerable

DAMAGING STRESS

Relentless
Toxic
Traumatic
The wear-and-tear on the body and brain resulting from chronic over-activity or inactivity of physiological systems that are normally involved in adaptation to environmental challenge, i.e. poverty, parenting alone, challenged family member.
RELENTLESS STRESS

- Poverty
- Parenting alone
- Multigenerational caregiving
- Multiply challenged children
- Severe injury/illness in primary caregiver
- Severe medical/mental illness/injury in close family
RELENTLESS STRESS IN PARENTS

MAY LEAD TO TOXIC STRESS IN CHILD
Strong and prolonged activation of the body’s stress management systems

Particularly problematic during critical developmental periods because of effects on basic brain architecture

Derails normal development
CHILD DEVELOPMENT
THE PROLONGED PROCESS OF INTEGRATION

EMOTION
SENSATION
KNOWLEDGE
AWARENESS
JUDGMENT
MORAL FRAMEWORK

YOU

MORAL FRAMEWORK

Sensation

Knowledge

Awareness

Judgment

Emotion

You
When life is a warzone
• Integrated Experience
• Can be recalled
• Weathering of memory
Fear simultaneously initiates two information-processing systems: the “low road” and the “high road” (LeDoux, 1996).
LOW ROAD AND THE HIGH ROAD

24 milliseconds

12 milliseconds
Epinephrine (adrenalin)
The Human Stress Response
The problem with extreme stress
Epinephrine (adrenalin)
Cortisol
Endorphins

THE HUMAN STRESS RESPONSE
Oh horror! horror!
Horror! Tongue nor heart cannot conceive nor name thee!

Macbeth, Act, Scene 3
Trauma by nature drives us to the edge of comprehension, cutting us off from language based on common experience or an imaginable past.

B. A. van der Kolk MD, Bessel (2014). *The Body Keeps the Score: Brain, Mind, and Body in the Healing of Trauma*
TRAUMA = FRAGMENTED SENSATIONS, EXTREME EMOTIONS AND MEMORY WITHOUT A COHERENT NARRATIVE
ALL TRAUMA IS PREVERBAL
B. A. van der Kolk, *The Body Keeps the Score*
One name for the Devil is “Diabolos” which means the divider, the splitter-into-fragments.

Robin Skynner, *Life and How to Survive It*
Dissociation = A disruption in the usually integrated functions of consciousness, memory, identity, or perception of the environment
FREEZING

Increases survival chances because

- Predators detect moving prey more easily but have difficulty with noticing immobile objects
THE TEN THOUSAND YARD STARE
POST-TRAUMATIC REMINDERS
- TRIGGERS FOR BEHAVIOR
TRIGGERS

- Survival Response Initiated
- Implicit Memories
- Sensory Experiences
- Instant Associations
Triggered by sensory element

Original fear revived

Traumatic moment re-experienced
CHRONIC HYPERAROUSAL = PSYCHOSOCIAL TRAP

- Loss of emotional management
- Sleep problems
- Daytime fatigue
- Irritability
- Easily triggered by minor stimuli into fight-flight-freeze
- Intrusive experiences
- Avoidance of people/places/thing
MALADAPTIVE COPING

- Substance use: Addiction
- Avoidance of triggers: Anxiety, phobias, Agoraphobia
- Pain as a distraction: Self-harming, Fighting
- Avoidance of grief: Depression, suicidality
- Risky behavior: Addiction to trauma
- Controlling behavior: Alienation from others
- Dissociation: Reenactment, revictimization
- Empowerment through violence: Criminal, antisocial behavior
Ramping down Habits
Those who cannot remember the past are condemned to repeat it (p284). George Santayana, 1905, *The Life of Reason: Or, The Phases of Human Progress,*
We are embodied creatures.

We are of two "minds" within the context of very complex brains.

We are social creatures and our sense of self emerges out of our family, community, society.

We enact our world through imitating others.

We are creatures of habit.
We deal with trauma by doing whatever we can to survive.

Trauma leads to failure of integration as well as blocked adaptive behavior.

Fragmentation leads to bad habits.

Bad habits determine repetition.
HEALING AND THE ARTS
Dr. Roy Stern

Born in Germany, family escaped the Nazis

Psychoanalytically trained but not dogmatic about anything

Nonverbal guy

Explanations through behavior

Saw humor in almost everything
THE IMPORTANCE OF THE EXPRESSIVE ARTS FOR HEALING AND RECOVERY: CREATIVE CHANGE
<table>
<thead>
<tr>
<th>Expressive and Creative Therapies</th>
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<tbody>
<tr>
<td><strong>Psychodrama</strong></td>
</tr>
<tr>
<td>Drama Therapy</td>
</tr>
<tr>
<td>Art therapy</td>
</tr>
<tr>
<td>Music therapy</td>
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<tr>
<td>Movement therapy</td>
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<tr>
<td>Life story</td>
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<td></td>
</tr>
<tr>
<td><strong>Trauma Art Narrative Therapy</strong></td>
</tr>
<tr>
<td>Narrative therapy</td>
</tr>
<tr>
<td>Video dialogue &amp; digital story</td>
</tr>
<tr>
<td>Pet and equine therapy</td>
</tr>
<tr>
<td>Journaling and stories</td>
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<tr>
<td>Horticulture therapy</td>
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</tbody>
</table>

**Transforming Pain, Creating Narratives**
A VITAL PART OF HUMAN EVOLUTION

- Ritual
- Ceremony
- Creative Expression
Dancing, singing, portraying, representing composing, performing - prompted by whatever impulse - are central to the existence of the species.
Even newborns 41 minutes old, can imitate rudimentary manual and facial gestures

Innate mechanism present in newborn brain

Don’t learn to imitate as Piaget thought, but learn BY imitating

When we see someone else suffering or in pain, mirror neurons help us to read her or his facial expression and actually make us feel the suffering of the pain of the other person. These moments are the foundation of empathy and possibly of morality, a morality that is deeply rooted in our biology, p.5.

Marco Jacoboni, 2008

Mirroring People
Mirror neurons help us reenact in our brain the intentions of other people, giving us a profound understanding of their mental states (p.78)

The mimetic level of representation underlies all modern cultures and forms the most basic medium of human communication.
Language seems to serve a different communicative purpose and carries on in parallel, without disturbing the fabric of spontaneous mimetic expression.
The tendency to automatically mimic and synchronize facial expressions, vocalizations, postures, and movements with those of another person and, consequently, to converge emotionally.
THE REENACTMENT (DRAMA) TRIANGLE

PLAY ONE ROLE, PLAY THEM ALL
The patient cannot remember the whole of what is repressed in him, and what he cannot remember may be precisely the essential part of it ... he is obliged to repeat the repressed material as a contemporary experience instead of remembering it as something in the past.

Sigmund Freud

Beyond the Pleasure Principle, p. 18, 1920
CHANGING THE SCRIPT THROUGH DRAMA: PSYCHODRAMA
Each individual hysterical symptom immediately and permanently disappeared when we had succeeded in bringing clearly to light the memory of the event by which it was provoked and in arousing its accompanying affect, and when the patient had described that event in the greatest possible detail and had put the affect into words.
Aristotle took up the term to express the effect produced by tragedy and certain kinds of music.

The conception is that of exciting by art certain passions already existing in the spectator in order that...the person might experience relief from them and return to the normal condition.

The cure is not wrought by the mere excitement, but by an excitement produced by an artistic agency, which at the same time brings order, harmony, and wholeness to bear.
FROM BIRTH TO DEATH WE ARE SENDING OUT SIGNALS AND ASKING FOR RESPONSE
Ritual, and its derivatives in theatre, differs from most other forms of mimetic representation in that it is a collective act in which individuals play different roles.
Healing is performed as a ceremony

Ceremony is main therapeutic agent

Often re-enactment of initial and pathogenic trauma

Often re-enactment of great myths of the tribe

Patient is integrated in a group
HEALING RITUALS
(LEVI-STRAUSS)

- Trance induction
- Reliving of situation in precise detail
- Integration of pain into a meaningful whole by giving pain a meaning in a larger mythical system
- Entire social network involved
The name originally given to those who were the attendants of the cult of Asclepius and who served the god by carrying out the prescribed ritual.
ASCLEPIUS

God of healing and the arts

Worship did not die out until 5th c.A.D.

Asclepius learned healing from Chiron

Chiron, half-man, half-beast = irrational and rational parts of healing

Part of treatment was to write odes or mimes and to compose songs

Music & choruses were played.
ASCLEPIUS

- Magnificent theaters attached
- In Athens, temple of Asclepius next to Theater of Dionysus
- Required literary production as a thank offering
- Patron of artists
- Care of “soma kay psyche” - body & soul
The illness is the symptom that somewhere - on whatever level or levels - the ecological unit is disturbed. As the Navaho Indians say: *To be sick is to be fragmented. To be healed is to become whole, and to become whole one must be in harmony with family, friends, and nature.*

Otto Van der Hart, *Rituals in Psychotherapy*
HEALING = INTEGRATION
HEALING REQUIRES OTHER PEOPLE – WE ARE PART OF A SOCIAL GROUP FROM CRADLE TO GRAVE
The traumatic nature of our evolutionary history necessitated the development of adaptive coping skills, but the result of employing these skills is fragmentation and the loss of integrated functioning.
Artistic performance, in all its variations, is a primary integrating mechanism in an organism highly susceptible to the protective, but ultimately destructive mechanism we call dissociation.
THE ARTS AS THE BRIDGE ACROSS THE “BLACK HOLE” OF TRAUMA
AND PERHAPS THE ONLY BRIDGE ACROSS THAT CHASM THAT WE NATURALLY EVOLVED
WE ARE OF TWO MINDS

Right

“How?”
- Nonverbal language
- Communication of emotion
- Ancestor of language
- Integration of information

Left

“What?”
- Verbal language
- Breaking wholes into parts,
- Analyzing and abstracting,
- Devising categories
My thesis is that for us as human beings there are two fundamentally opposed realities, two different modes of experience; that each is of ultimate importance in bringing about the recognizably human world; and that their difference is rooted in the bihemispheric structure of the brain. It follows that the hemispheres need to co-operate, but I believe they are in fact involved in a sort of power struggle, and that this explains many aspects of contemporary Western culture (p.3).

Iain McGilchrist (2009)
The Master and His Emissary:
The Divided Brain and the Making of the Western World
Every work of art points somewhere beyond itself; it transcends itself and its author; it creates a special force field around itself that moves the human mind and the human nervous system.

Vaclav Havel, *Disturbing the Peace*
THE END